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AT THIS MOMENT, when the old world's monarchical institutions are fast falling to pieces, it is interesting to look at home, at the prosperous and happy condition of our new-world republic.

Abroad, the sovereign springs from a privileged class, and holds his position by the force of the army. His state and government are supported by heavy taxes, wrung from the laboring classes, often entirely without their consent. At home, the people are the sovereign power. The safety of their government lies in their own intelligence; and the taxes paid for the maintenance of public order, or to create public works, fall with no heavy or unequal pressure, but are wisely and justly distributed throughout all classes of society.

In the United States, the *industrial classes* are the true sovereigns. *Idleness* is a condition so unrecognized and unrespected with us, that the few professing it find themselves immediately thrown out of the great machine of active life which constitutes American society. Hence, an idle man is a cypher. Work he must, either with his head, his hands or his capital; work, in some mode or other, or he is a *dethroned sovereign.* The practical and busy spirit of our people repudiates him, and he is of no more absolute consequence than the poor fugitive king,—denied, and driven out by his subjects.

The CULTIVATORS OF THE SOIL constitute the great industrial class in this country. They may well be called its "bone and sinew;" for at this moment do they not only feed all other classes, but also no insignificant portion of needy Europe, furnish the raw material for manufactures, and raise the great staples which figure so largely in the accounts of the merchant, the ship owner and manufacturer, in every village, town and sea-port in the Union.

The *sovereign people* has a better right to look over its "*rent roll*"—to examine the annual sum total of the products of its industry, than any other sovereign whatever; and it has accordingly employed Mr. BURKE, the excellent commissioner of patents, to collect statistical facts, and publish them in the annual report of his office.

An examination of the condition of this country, as exhibited in Mr. BURKE's report* of its industrial resources, will, we think, afford the best proof ever exhibited of the value of the the American Union, and the extraordinary wealth of our territory. The total value of the *products of the*

* This report is now in press at Washington. Our data have been copied from an abstract already published.

soil, alone, for the past year, he estimates at more than *one thousand five hundred millions* of dollars.*

The value of the grain crops and great agricultural staples of the country, for 1847, amounts to $815,863,688.

The value of all horticultural products, (gardens, orchards and nurseries,) is estimated at $459,577,533.

The value of the live stock, wool, and dairy products, amounts to $246,054,579.

The value of the products of the woods and forests, amounts to $59,099,628.

It is also estimated that there were produced last year 224,384,502 bushels of *surplus* grains of various kinds, over and above what was amply sufficient for home consumption. This is much more than enough to meet the ordinary demand of all the corn-buying countries of Europe.

Over *one thousand five hundred millions* of dollars, in the products of the soil, for a single year! Does not this fully justify us in holding up the cultivators of the American soil as the great industrial class? But let us compare them a little, by Mr. BURKE's aid, with the other industrial classes.

The annual product of all the *manufactures* in the Union, for 1847, is estimated at $500,000,000. The profits of trade and commerce at $23,458,345. The profits of fisheries $17,069,262; and of banks, money institutions, rents and professions, $145,000,000. Total, $809,697,407.

Here we have the facts, or something, at least, like an approximation to the facts, of the results of the yearly industrial labor of the republic. The average amount is the enormous sum of over *two thousand three hundred and eighty-nine millions of dollars.*

Of this, the agricultural class produces *nearly double that of all other classes*, or over one thousand five hundred and seventy-nine millions; while all other classes, merchants, manufacturers, professional men, etc., produce but a little more than *eight hundred and nine millions.*

There are a few, among the great traders and "merchant princes," who do not sufficiently estimate the dignity or importance of any class but their own. To them we commend a study of Mr. BURKE's statistical tables. There are some few farmers who think their occupation one of narrow compass and resources; we beg them to look over the aggregate annual products of their country, and take shame to themselves.

It is no less our duty to call the attention of our own readers to the great importance of the *horticultural interest* of the country. Why, its products ($459,000,000,) are more than half as great in value as those strictly agricultural; they are almost as large as the whole manufacturing products of the country; and half as large as the manufacturing and all other interests, excepting the agricultural, combined.

In truth, the profits of the gardens and orchards of the country, are destined to be enormous. Mr. BURKE's estimate appears to us very moderate; and from the unparalleled increase in this interest very recently, and the peculiar adaptation of our soil and climate to the finest fruits and vegetables, the next ten years must exhibit an amount of horticultural products which will almost challenge belief. The markets of this country will not only be supplied with fruit in great abundance and excellence, but thousands of orchards will be cultivated solely for foreign consumption.

The system of railroads and cheap transportation already begins to supply the seaboard cities with some of the fair and beautiful fruits of the fertile west. When the orchards of Massachusetts fail, the orchards

* $1,579,595,428.

of western New-York will supply the Boston market with apples; and thus, wherever the finest transportable products of the soil are in demand, there they will find their way.

There are, however, many of the finer and more perishable products of the garden and orchard which will not bear a long journey. These, it should be the peculiar business of the cultivator of the older and less fertile soil in the sea-board states to grow. He may not, as an agriculturist, be able to compete with the fertile soils of the west; but he may still do so as a horticulturist, by devoting his attention and his land to orchards and gardens. If it is too difficult and expensive to renovate an old soil that is worn out, or bring up a new one naturally poor, for farm crops, in the teeth of western grain prices, he may well afford to do so for the larger profit derived from orchard and garden culture, where those products are raised for which a market must be found without long transportation. He who will do this most successfully must not waste his time, labor and capital, by working in the dark. He must learn gardening and orcharding as a practical art, and a science. He must collect the lost elements of the soil from the animal and mineral kingdoms, and bring them back again to their starting point. He must seek out the food of plants in towns and villages, where it is wasted and thrown away. He must plant and prune so as to aid and direct nature, that neither time nor space are idly squandered.

Certainly, we have just pride and pleasure in looking upon the great agricultural class of America. Landholders and proprietors of the soil, as they are, governing themselves, and developing the resources of a great nation—how different is their position from that of the farmers of England,—hundreds of thousands of men, working, generation after generation, upon lands *leased* by a small privileged body, which alone owns and entails the soil; or even from that of France, where there are millions of proprietors, but proprietors of a soil so subdivided that the majority have half a dozen acres, or perhaps, even a half or fourth of an acre in extent,—often scarcely sufficient to raise a supply of a single crop for a small family.

If we have said anything calculated to inspire self-respect in the agricultural class of this country, it is not with a view to lessen that for any other of its industrial classes. Far from it. Indeed, with the versatility of power and pursuits which characterise our people, no class can be said to be fixed. The farming class is the great nursery of all the professions, and the industrial arts of the country. From its bosom go out the shrewdest lawyers and the most successful merchants of the towns; and back to the country return these classes again, however successful, to be regenerated in the primitive life and occupation of the race.

But the agricultural class perhaps is still wanting in a just appreciation of its importance, its rights and its duties. It has so long listened to sermons, lectures and orations, from those who live in cities and look upon country life as "*something for dull wits*," that it still needs apostles who draw their daily breath in green fields, and are untrammelled by the schools of politics and trade.

The agricultural journals, over the whole country, have done much to raise the dignity of the calling. They have much still to do. The importance of agricultural schools, of a high grade, should be continually insisted upon, until every state legislature in the Union comes forward with libe-

ral endowments; and if pledges ought ever to be demanded of politicians, then farmers should not be slow to require them of their representatives, for legislation favorable to every sound means of increasing the intelligence of this great bulwark of the country's safety and prosperity—the *cultivators of the soil.*

THE HYBRIDIZATION OF THE CAMELLIA JAPONICA AND ITS VARIETIES,

WITH THE TREATMENT OF THE OFFSPRING.

[By Marshal P. Wilder, Esq, President of the Massachusetts Horticultural Society.]

[We copy the following highly interesting article from the 2d number of the *Transactions of the Massachusetts Horticultural Society.* Ed.]

The following remarks have been prepared in compliance with a request of the Committee of Publication, to furnish an article on the cross-breeding of plants; but more particularly to give some account of the method of practice, and the results of my experiments in the production of hybrid varieties from this beautiful family of Flora.

In treating of this branch of vegetable physiology, I do not expect to promulgate any new theory in explanation of the process by which nature carries on this part of her secret handiwork, or of the laws and principles upon which an All-wise Providence has based the mysterious system of the re-production of the races of beings and plants.

My earliest experiments were pursued more as a matter of recreation than as a scientific study, and although in many instances quite satisfactory, still it is to be regretted, that from causes which could not be controlled, by one busily engaged in other avocations, some of them need farther confirmation. I shall not, therefore, pretend to lay down any fixed rules, from which there can be no departure under any circumstances or treatment, but simply refer to such as are well established in my own mind, and which, it is believed, will by similar process produce like results. For the success attendant on these efforts, I am largely indebted to the researches of the late Rev. Mr. Herbert, of Spofforth, England, published many years since, in an article on "Crosses and Hybrid Intermixtures." (See his Amaryllidaceæ.)

The Reverend gentleman to whom I have alluded, in his investigations into the structure and functions of vegetables, discovered in his experiments with the Camellia, that, "*single flowers, or those raised from single ones,*" were the best as breeders, or seed bearers; and that, for the production of fine double flowers, it was important that the pollen, used for impregnation, should be borne on a petaloid anther, thus becoming petaloid pollen; and further, that this was still better, if from a double flower. Another precaution was to prevent the plant making any new wood, by cutting out the young shoots as fast as they appeared, thereby forcing as much nutriment as possible to the newly formed germ.

Practicing on these suggestions, and believing that every change effected by cross-fertilization is a remove from the normal form, and therefore more easily susceptible of continued mutations, I have preferred *hybrids* for bearing the seed; and in the selection of the flower to be impregnated, I

have had special reference to the strength and prominence of the style, the form of the corolla, and the perfection of its petals; and, I think, for raising varieties with double flowers, we are more dependent, than has generally been apprehended, on the kind of pollen used; viz., *that which is borne on a petal;* this petaloid change being, as I imagine, the incipient stage towards a full petalous form. I entertain the opinion, that varieties possessing the prerequisites thus described, when fecundated with this pollen, will, for the most part, produce double seedlings, with petals more or less multiplied, and not unfrequently, flowers that are full and symmetrical, and devoid even of the seminal organs. It may be here observed, that the larger and better developed *this petaloid* anther, the better the chance for a fine offspring, for, as Mr. Herbert remarks, "the corolla, in truth, belongs to the male portion of the flower, the anthers being borne upon it, or in some manner connected with it by a membrane."

That single or semi-double sorts with perfect corollas, are more certain to produce flowers of a regular symmetrical formation, I have pretty conclusive evidence, as will presently be shown; still, I have had good success with those raised from the pæony, or loose waratah formation, but the proportion of such has been less; and these have been more frequently stuffed with small petals, or their rudiments. This opinion, in relation to the latter class, I am happy to learn, is confirmed by the experience of Noel J. Becar, Esq., of Brooklyn, N. Y., who, practicing on these principles, has produced several fine varieties from C. Middlemist, C. Colvillii, C. imbricata alba, &c., one of which, of first rate properties, from C. Colvillii, by C. Donkælarii, was on exhibition at the rooms of the Society the past winter.

In corroboration of what has been stated, I adduce the following illustrations taken from my own memoranda; remarking, however, that the offspring from the same capsule has varied much, although in my judgment conforming to the principles advanced.

HYBRIDS FROM SEEDS OF SINGLE VARIETIES.

From the Single Red, (the type of the genus,) by pollen of C. punctata.

CAMELLIA RICHARDSONII, a very full lilac crimson flower, with sixty to seventy petals, of the regular form.

CAMELLIA MARIA LOUISA, perfectly double and regular, sometimes hexangular, like C. Lady Hume; color deep rose, or crimson, with a peculiar metallic lustre.

CAMELLIA WILDERII, thus described in the Transactions of the Society: "flower delicate clear rose; petals seventy-five to eighty in number, beautifully imbricated and arranged with exquisite regularity."

From a large single hybrid crimson, by C. Lindbriata, a very full perfect flower, of the color of the female parent, much like C. coccinna in form, but more double.

From C. Aitonia, by C. alba grandiflora; double white, large, nearly regular, but with occasionally a few anthers.

From Single White, by Anemoneflora alba; numerous white and parti-colored varieties, more or less double, the best of which is a full creamy white, striped with rose, like Duchesse d'Orleans, but not so regular.

EXAMPLES FROM THE SEED OF DOUBLE VARIETIES.

From Camellia imbricata alba, by pollen of the C. variegata; a double white, nearly of the regular form, with a few stamens.

From C. King, by C. variegata; a full symmetrical flower, very dark crimson, striped with white —peculiar.

From C. elegans, by C. punctata; an enormous large, globular, white flower, of the irregular shape.

From C. Lindbriata, by C. punctata; very clear beautiful pink; corolla and petals large, like the female plant, but not entirely full.

From C. Lindbriata, by C. alba grandiflora; a very thick, full, globular flower, white, striped with rose.

From C. Colvillii, by C. Donkælarii; a double symmetrical flower; color, delicate rose or pink, striped with white.

From the same, by the same, a very perfect double flower; color, clear rose.

From C. punctata, (male parent not known,) Eurydice Augusta, a perfect regular flower; color, light rose, broadly striped with white, and re-

sembles Pressley's Queen Victoria, but surpasses it in beauty.

From C. Middlemist, by C. pomponia ; the fine white variety figured in Transactions of the Society ; very circular, of great depth, full and perfect ; occasionally suffused or touched with light rose.

Having explained my views in relation to the influence of petaloid pollen, I add, as proof, a few examples illustrative of the inefficiency of *simple pollen* to generate double flowers. This rule is not stated as invariable, but where the exception arises, may it not be from a state of transformation not visible to the eye.

From Camellia pæoniflora, by C. Donkælarii, several single seedlings, one of which, of the exact color of the former, and singularly veined with deep red.

From C. Colvillii, by C. Donkælarii ; seedlings, with single flowers of various tints, but with no disposition to double.

From C. tricolor, fertilized with itself ; seedlings, with white and red single flowers, but retaining in habit and foliage the character of the parent.

From C. Donkælarii, by itself, a fac-simile, in habit and foliage, but in flower resembling almost precisely the old single red.

Camellia myrtifolia, and C. imbricata rubra, having departed from their general double form, produced a few anthers, the pollen of which was seized on as most desirable for impregnating with, but the progeny of these crosses, although in one instance so similar in foliage to C. myrtifolia as hardly to be distinguished from it, brought only ordinary single flowers ; these varieties seldom deviate from their usual perfect form, and it was therefore noticed, that none of the anthers were petaloid. The seedlings, also, of the Abbe Berlese and Mr. Herbert, raised from crosses by C. myrtifolia, were no better than mine, and Mr. H. declares his were "single flowered, and the worst he ever raised." To whatever cause this sporting from the accustomed habit may be attributed, and without regard to the agency which the female plant may have in generating double flowers, it is obvious that the pollen in these instances was deficient in the proper ingredient, and further, that the circumstances which induced the blossoms to revert to the primordial stamp, also imparted to the plants a strange retardation of inflorescence ; those of C. myrtifolia not coming to the flowering state, with me, until the seventh or eighth year, and with the Abbe not until the twelfth.

I have alluded in another place to the structure of the flower designed for seed, and although I place great reliance on the kind of pollen to be used, and doubt not that the juices of the style have, also, a corresponding duty to perform ; still, I attach great importance to its perfection and substance ; for where the style has been feeble, distorted, or so imperfectly developed as to exist in numerous divisions, my success has been quite limited.

Without, therefore, attempting to explain the mysteries of fertilization, or to define the line beyond which there can be no intermixtures or crosses of the vegetable kingdom, a point on which botanists are much in doubt at the present day, and with no pretensions "to breed to a pattern," or "to wash out the last tip of black from the pigeon's wing," I submit the foregoing observations, with due deference, to those better skilled in botanical science than myself.

There have been so many treatises published on the cultivation of the Camellia, some of which are quite elaborate, it would be superfluous to enter on it here. It may not, however, in concluding this article, be considered irrelevant, to add the following brief directions :—

The plants selected for fructification should be removed from the Camellia house to one of higher temperature ; this will essentially assist fertilization, and in many cases render those fruitful which would not otherwise become so.

As soon as the flower to be impregnated is sufficiently expanded, the anthers should be cut out, taking care that this be done before they open, and that the pistil be not injured by the operation.

The stigma is generally ready for impregnation in twenty-four to thirty-six hours, when the pollen, if mature, may be applied, selecting, if practicable, the middle of a bright sunny day.

In five to ten days after the ovules are fecundated, the young capsule commences swelling, after which all new shoots should be removed and the plants, once a week, liberally supplied with guano water; this I have found a great aid in ripening full and perfect seed.

The seeds, when gathered, should be immediately labelled with their genealogy, and stored in pots of sand, kept moderately moist and warm; in about two months they will commence sending forth their young radices; as soon as these are perceived, each seed should be planted in a small shallow pot, thus preventing the long tap, which in the common mode of planting descends to the bottom, without any horizontal or fibrous roots. The pots should then be placed in a mild hot-bed, or stove, giving a little air as the foliage becomes developed, and when they have attained the height of three or four inches, be removed to a shelf near the light, and carefully watered. When the first growth has ripened its wood, the plants should be shifted to pots a size larger, and if treated with liquid guano, will attain the first season eight to ten inches in height; these are now sufficiently large for inarching, and thus, in two or three years from the seed, you may generally prove whether the new hybrid be worthy of extension.

The compost for young plants consists of two parts well rotted turfy loam, one part leaf soil, and one part peat or heath mould, with sand to make it free.

POMOLOGICAL NOTES.

BY PROFESSOR KIRTLAND, CLEVELAND, OHIO.

[We copy the following interesting notes from a copy of our work on *Fruit Trees*, which Professor Kirtland, one of the most intelligent pomologists in the west, kindly sent some months ago, when we were revising the eighth edition of this work, just published. As many of them are worthy of the attention of fruit growers, and as only a portion of them could be made use of in our work, we take the liberty of preserving them in this form.

The copy of our Fruits in which these memoranda were written, has the appearance of being well worn; and on a blank leaf, at the commencement, we find the following note in Prof. K.'s hand:

"This volume has performed a missionary tour to half the houses in this township, and has done much service by awakening a taste for horticulture in a class of people who own some of the best soil and localities for fruit in the United States, but who, beforehand, had little or no conception of the importance of cultivating it.

"They have not always washed their hands before turning over its pages."]

Grafting—p. 15. Side-grafting succeeds best for spongy wood, such as the peach,

magnolias, and ash. The magnolia takes freely if side-grafted and tongued, but will not succeed if the stock is amputated after the usual plan. The rose Acacia takes easily on the common glutinous locust, (*Robinia viscosa*,) and makes a beautiful standard tree, if the graft be sloped upon one side and inserted under the bark, as in budding.

Influence of the Graft—p. 24. A graft of the *Green* Newtown Pippin will invariably render the bark of the stock rough and black, (the habit of the variety,) within *three* years after its insertion.

Sucker Stocks—p. 29. The loss of our pear trees, attributed to fire-blight, is very often the result of using suckers for stocks.

Pruning—p. 30. I doubt if much pruning (orchard trees) is proper on the shores of Lake Erie and the other great lakes. Trees of all kinds incline to form thick heads; and if thinned out freely, they generally soon decay.

Mulching — p. 45. A capital practice in transplanting trees. Decaying leaves from the wood are excellent for this purpose.

Well Trenched Soil—p. 50. The following paragraph must have the entire assent of every practical fruit grower in the country:—"Indeed, no fruit garden, where the soil is not naturally deep and rich, is in perfect condition for planting trees, unless the soil has been well trenched two spades in depth. This creates a matrix for the roots, so deep and permanent, that they retain their vigor and luxuriance through the drouths of summer, and continue for a long time in a state of health and productiveness."

Insects—p. 63. Our apple trees are often injured by the larva of the *Bupestris*, which will girdle out extensive portions of the bark and young wood. Page 66—*Apple Worm*—the *Curculio*, and not this insect stings our apples.

Best Soil for the Apple—p. 69. Apples raised on the *limestone* hills in Ohio are richer and higher flavored than from any other locations.

Common Berberry.—Experience has convinced us, the pollen of this berberry *will* blast wheat and rye.

MEM. ON APPLES IN DOWNING'S FRUITS.

American Summer Pearmain.—First rate.

Benoni has not equalled our expectations.

Bevan's Favorite is a valuable summer apple.

Early Red Margaret.—Common and popular here, but much inferior to *Summer Rose* and *Bevan's Favorite.*

Summer Queen.—Good on warm sandy soils; poor on cold clay lands.

Beauty of Kent.—Showy, but of little value.

Golden Sweet.—Very valuable for *swine;* for which, along with clover, it forms the cheapest and best of food. Every farmer should cultivate at least 20 or 30 trees.

Gravenstein—excellent. *Jersey Sweeting*—valuable. *Maiden's Blush*—valuable for marketing; not high flavored.

Nonsuch—p. 91. The *Richfield* Nonsuch is the best winter apple with which I am acquainted. It was introduced there from abroad; true name not known. [We have since seen specimens of this fruit, from Ohio, that justify Prof. K.'s opinion. It proves to be the "Old Nonsuch" of Massachusetts, or Canada Red of western New-York, noticed in a previous page of the Horticulturist, but quite distinct from the English Nonsuch, described in our Fruits. Ed.]

Rambo.—The *universal* apple of the German population in Ohio.

Seek-no-further.—Coxe's Seek-no-further is only a second rate fruit. Westfield Seek-

no-further—very excellent. I think it is the same as the "Marietta Seek-no-further" of this state.

Stroat.—Fruit excellent; tree not vigorous.

Yellow Bellefleur.—Fruit rather light and tart at the north; flavor higher at Cincinnati.

White Bellefleur, (?)—Is not this synonymous with *Woolman's Long*, or *Ortley Pippin?*

Detroit, or *Red Detroit*, (?)—Red Calville?

Doctor.—Fruit large, crisp, tender,—for eating and cooking. Tree vigorous. My tree came from Burlington, N. J. Can yours be correct?

Domine.—Cultivated in this vicinity as the "*Ramboulrette.*"

Jonathan.—Valuable; preferable to the Esopus Spitzenburgh in this locality.

Lady Apple.—Beautiful, but with us, subject to the fire-blight.

Newtown Pippin.—The *Yellow* is preferable to the *Green* in northern Ohio. Both thrive well, only on soil containing lime. Indeed, I have never known the Newtown Pippin to flourish, except on a limestone formation, or when the soil was supplied with lime.

Pennock—is not, and never was, worth cultivation; flavor *bitter* and sweet; subject to the *dry rot.*

Rhode Island Greening—on warm, sandy soil, yellow and fine flavor; on clay soil, the skin tough, flesh fibrous and sour.

Roman Stem.—20 years since, this was one of our best winter fruits; now, not so fair as formerly. I had it from Burlington in 1820.

Swaar.—Very excellent.

Esopus Spitzenburgh.—Not so good in Ohio as it was 25 years since at the east.

Winesap.—Best of all apples for baking; drill out the core with a long and narrow knife, [or apple corer,] fill the cavity with butter and sugar rubbed together, place the apples in a hot, closely covered bake-kettle till they are cooked.

No. 184, (?), *Red Astrachan Crab.*—This is *dark* red, and very showy.

MEM. ON CHERRIES.

Black Tartarian.—Was cultivated in Wallingford, Ct., as early as 1810, under the name of "Double Heart," or "Bishop's Large;" and in Middletown, Ct., in 1818, as Black Tartarian. In both cases, brought from N. Y.

Downer's Late—is becoming very popular in this vicinity.

Waterloo.—The *true* sort has never been cultivated here. [It is very scarce in this country; that usually sold being incorrect. Ed.]

Bigarreau.—Very fine, but decays suddenly, as about to ripen. The tree is hardy and productive. The White Bigarreau is an indifferent bearer—the tree not hardy.

Napoleon Bigarreau.—First rate, except a little deficient in richness; very hardy and productive; a slight inclination in the fruit to decay.

New Large Black Bigarreau.—Obtained from Kenrick; proves to be only Black Tartarian.

Elton.—The finest fruit of the cherry kind; tree somewhat tender.

Belle Magnifique—has fruited two years with me; a good *acid* cherry, fine for cooking, and *very late.* Sept. first, *ripe fruit* still on the tree.

Grapes.—The crops of native grapes are more certain at Cleveland than at Cincinnati. *Bland* is not adapted to our climate. The Catawba ripens well, and is our best grape. The Ohio is rather tender for this climate.

The foreign grapes of the hardiest kind do not succeed more than one or two seasons, while the vines are young, in the open air. After that, the fruits *mildew.*

Curculio, or *Plum Weevil.*—This insect, last season, destroyed every plum on my farm, except the crop of one tree in my swine lot; that tree is bending under its load of fruit. *I believe that swine and hens will effectually protect a large orchard of plum trees against the attacks of the curculio.* Persevering shaking off, and picking up of the punctured fruit will do the same, but requires much labor. This species of curculio breeds in our forests, and even in some succulent plants. In 1835, it was very abundant in Trumbull county, Ohio, though not a plum tree grew in that county in 1834. It seemed to emigrate in '35, from the woods. Instinct directs its movements. It will avoid trees standing in places where its larva or its chrysalis must evidently be destroyed; and I think this in part accounts for the effect of swine and poultry in interrupting its operations.

This insect is an epicure, and will usually select the tenderest and best varieties. But if hard-pushed for a supply of fruit, it will also attack the wild plum, the peach and the apple.

NOTES ON PLUMS.

Coe's Golden Drop.—Has not ripened well here for the last three years; requires a long season; have never known it very fine but once.

Diamond.—Prolific, but coarse, and destitute of fine flavor.

Smith's Orleans.—Fine and valuable.

Pear Tree Blight—p. 322. I doubt whether the 1st or 2d view embraces the correct *pathology* of "*Fire-blight*," as it prevails here. The disease seems to depend on a peculiar state of the atmosphere—*a saturated state of moisture*, as manifested by the hygrometer, and a hot, *scalding* impression of the sun. Insects and frosts may produce a peculiar disease,—the latter often kills apples, pears, and cherries, as described by Rev. Mr. BEECHER; but our western blight is a morbid, vegetable action, *sui generis—contagious*, and it may be excited into action by atmospheric vicissitudes. Bold and thorough *amputation* below the diseased parts, and burning all the limbs thus pruned off, is the only known remedy.

NOTES ON PEARS.

Belle de Bruxelles.—One of the best pears last season; trees received of Elwanger & Barry.

Bartlett.—Best of all pears, in my estimation, taking all circumstances into consideration.

Jargonelle.—Very popular, but not of much value.

Julienne.—Insipid with me.

Madeleine.—Very valuable; much superior to the Bloodgood in 1846 and '47. [The Bloodgood far superior here, in all seasons. ED.]

Beurré Diel.—Has not equalled expectations; flesh coarse and harsh; soil stiff clay. [Should be grown on quince stock. ED.]

Beurré Van Marum.—Has fruited for four years; valuable; the fruit middling; very productive.

Dix.—This must be a seedling of the old St. Germain.

White Doyenné, [St. Michael's or Virgalieu.]—I have cultivated this variety in Ohio since 1823, *and have never known it to manifest any signs of disease or decay.* It is now as healthy, vigorous and productive as it was when I first became acquainted with it in Hartford, Ct., in the year 1812. It is

not surpassed by any pear with which I am acquainted.

Gray Doycnné.—Tree rather less hardy than the foregoing.

Forelle.—Has fruited and proved fine in this neighborhood; but the tree is since dead with the blight.

Fred'k of Wurtemberg.—Well known; very handsome and popular here.

Marie Louise.—Excellent; but in order to obtain standard trees, must be grafted high on strong stocks.

Napoleon.—Very prolific and healthy; not equal in flavor to some other sorts.

Stevens' Genesee.—Promises to be first rate.

Beurré d'Aremberg.—Equals the highest anticipations.

Easter Beurré.—Does not always mature sufficiently in autumn here: occasionally excellent; but will not rank with the foregoing.

Uvedale's St. German.—Valuable for cooking; very prolific.

Virgouleuse.—I obtained this sort from N. J. in 1824; the tree is still standing in Trumbull county, but never yet produced a perfect fruit.

Winter Nelis.—Is my favorite for an *early* winter pear.

Oranges—p. 543. May be budded either in *June* or in *August*. At the former season, employ last years buds; at the latter, buds of the first growth of the present year. Those of the June insertion may make a growth of a foot or more in August.

Duration of Varieties—p. 555. The old *White Doycnné* pear is as healthy and productive here as any *new* seedling.

REMARKS ON THE CULTURE OF THE DAHLIA.

BY AN AMATEUR, NEW-YORK.

I HAVE observed that very little has been said in your columns of the Dahlia or its culture. In the last number, I see allusion made to the new class of Dahlias, which has been originated within a few years. I mean the "fancy flowers."

These deserve all the praise that you accord them; as, with the sole exception of the *autumnal roses*, it appears to me that the Dahlia, in its more modern form, is the pride and glory of the garden from midsummer to autumn. Many of the new varieties are as perfect as the double white camellia, and as exquisitely striped as a carnation; and the continual succession of bloom which they furnish makes them indispensable in every garden where there is room enough for a Dahlia parterre.

Without going into any systematic detail of the routine of Dahlia culture, I propose to offer a few hints, founded on some ten or twelve years practical experience. The English works abound with numerous directions for cultivating this plant; but our climate is so different from theirs, that very large departures from their rules are necessary.

It should be premised, then, that the great point in cultivating the Dahlia in the United States is to have a *deep soil*. Without this, it is almost five to one that you will fail to get a good succession of flowers. If the season is a moist one, the Dahlia will bloom profusely in almost any soil; but as the majority of our summers are hot and dry, the plants almost always get stinted and feeble, and produce few flowers in a thin or dry soil.

Many persons, also, err in supposing that fine Dahlias can be produced by crowding Dahlia roots into shrubbery borders, and parts of the pleasure ground filled with the roots of trees. It may do very well to employ this plant as a material to fill up such places and produce what flowers it may; but whoever wishes *perfect blossoms*, and a *continual succession* of them, must *set his plants in an open, airy situation, where the soil has previously been trenched two spades deep, and well manured.*

In these two points, so far as my observation and experience are worth anything, lie the whole art of growing fine Dahlias. Trenching to the depth of 20 inches will give dark green healthy foliage, and well formed flowers in abundance, in a soil which, without trenching, will only produce lean and meagre plants, with weak shoots, yellowish foliage, and a few indifferent blooms.

Pruning I do not think should be too much practiced on the Dahlia. Certainly, a plant is improved by having the weak and slender side branches taken off, and a shoot here and there cut out, if the variety has a disposition to grow so bushy that the branches are too crowded to permit a proper display of the flowers. But beyond this, I think pruning is not needed with us, as it is in the damper climate of England; growth-exciting as the latter is.

Dampness, and a moderate temperature, the Dahlia delights in. I agree with you, that the Messrs. THORBURN bear off the palm as the great Dahlia growers of this country. They have, however, great natural advantages, possessed by few cultivators of this plant. Their Dahlia ground, at Astoria, is a deep, sandy loam, only a few feet above the level of the East river. Hence, the subsoil is always somewhat moist, and the atmosphere more or less humid at night. Their season is also prolonged by this position, as many of your readers, who have seen their magnificent annual exhibitions of this flower in John-street, in the month of October, must be well aware.

Very few people in this country care to take the trouble to compete with the English florists, with their many advantages, in raising new sorts of the Dahlia from seed. To those who do, however, the following hint is worth attention. Always save your seed from the outside row of the seed vessel, and not from the centre. Repeated experiment has proved that the former seeds will give *double* flowers and the latter single ones, with almost equal certainty.* The same thing is true of China Asters, and other syngenesious plants.

A good many amateurs, who cultivate only a few Dahlias, fail in preserving the roots through the winter. The failure usually results from too much pains-taking, drying the roots, putting them in a warm, airy place, etc. Now the Dahlia tuber will not bear a dry atmosphere; it shrivels and loses the vital power; and if packed away in sand, &c., it often decays. What it wants is a somewhat damp atmosphere, quite free from frost. No one who has a green-house ever experiences the least difficulty in preserving the roots; it is sufficient to lay them on the floor under the stage. Alternate moisture and dryness does not injure them, provided they dry and do not remain long wet.

A good cellar for potatoes will usually keep Dahlia roots also, if the roots are simply laid on the floor. A friend of mine, who failed several seasons in preserving them, from want of knowledge of their nature, informs me that he has succeeded perfectly since he has mixed them in the bins with

* I mean, of course, when the seed is saved from the best semi-double, or nearly double flowers.

his potatoes, covering them two or three inches deep in those bins intended for spring use.

I think the finest flowers are had from good plants turned out of pots from the 20th of May to the first week in June. September is the Dahlia month—*par excellence;* and though it is well to plant some strong roots in April to come into bloom early, the late planted roots will usually give the purest and most perfectly formed blooms.

I will add, in conclusion, that old sorts of Dahlias "wear out" in any given soil, like potatoes; that is, they do not thrive as well after having been grown in one garden several years, as they did at first. It does not at all follow that the variety has really "run out" because this happens. Take it to a new soil, and it will bloom again as well as the first year the variety was "let out." Hence, it is well occasionally to change the roots of a favorite old sort, as you would "change the seed" of a potato. But, in fact, the Dahlias of the last three years are so far superior to the old varieties, that they are the only ones sought after at present. Yours.

AN AMATEUR.

New-York, May 10th, 1848.

TRANSPLANTING EVERGREENS.

BY W. BACON, RICHMOND, MASS.

A. J. DOWNING, ESQ.—Having recently been looking over the numbers of the current volume of "*The Horticulturist*," I have been exceedingly interested with several articles, from highly respectable cultivators in different sections, on "Transplanting Evergreens." It is a subject which certainly ought to meet with altogether more attention than it does at present from every cultivator; for no rural spot, whether it be the environs of home, the public promenade, or the cool and refreshing park, can be perfect without them. They give beauty to the scenery wherever they are found. Not only by their beautiful symmetry, but by the contrast they afford in their rich and unfading foliage,—differing so widely in form in their own family, and so varied from that of deciduous trees. In spring, they are lovely; in summer, beautiful; in autumn, when maturity spreads its variegated colours over the forest and the grove, to give interest to the decay of nature, they smile at biting frosts and cheerless winds; and when winter comes, "in her terrors clad," they stand unchanged, amid howling blasts, and pitiless storms, and driving snows, like "*the friend that is born for adversity.*" Who does not admire them, and who would not cultivate them?

It is a sad fact, and one that we hope will soon be exchanged for a better truth, that many neglect all attempts at the cultivation of evergreens, from an impression that the risk is greater in their removal than that which usually attends the process on deciduous trees. Another reason which some will give, is, that they have attempted to cultivate them and failed, and they will, therefore, spend no more time in the matter.

As it regards the first objection, we must say, from our personal experience, that we will as soon risk success in their removal as in that of any tree whatever, (unless it be the willow, or some of the species that can

hardly be killed under any circumstances.) *Care*, we know, is necessary; and so it is in taking up and transplanting all trees, if the highest degree of success would be obtained. This is reasonable; for men have no right to expect success where they bestow no pains. But to our *experience* with evergreens.

In our first efforts in their cultivation, we had heard different seasons recommended as *the best* for their removal. In order to satisfy ourselves on this point, we have tried each month, from September to June inclusive, and with very fair success. So we are able to say, that with proper care they may be removed in any of the autumn months, in any part of the winter, whether the ground is frozen or not, and through all the busy bustling spring and early summer, at just such times as the convenience of the operator may dictate. For the very *best time*, as our labors will warrant, we would recommend that, when the bud is fairly bursting; and from that until the new growth has attained an inch in length. We have put them out when the new branches were three or four inches long, and the temperature of the atmosphere so high that they would wilt before reaching home, and, by copious watering for a few days, have those branches assume their usual position, and continue their growth. We have also had instances where these drooping extremities would dry up in spite of our labors to resuscitate, and seen new ones shooting forth from buds which had hitherto lain dormant, and might never have been called into action, had not a necessary cause appeared to push them forward. The better time, however, is before they advance in growth so far as to have new wood, which, in its first stages, is so tender and herbaceous, of sufficient length to droop.

Our method of taking up and putting out again is somewhat like that of your correspondents, to whom allusion has been made. We get our trees from open lands, or sparsely wooded grounds, when we can. In this region, the fir, whose beauties all admire, is often found growing in old pastures on the high mountains. These pasture lands have a cold, moist, shallow soil, underlayed with an almost impermeable subsoil. In such localities, where the roots from necessity run horizontally and near the surface, there is but little difficulty in taking them up without loss of fibres or earth, especially if we take that sharp edged spade along to cut around the tree. The union between the soil and subsoil is not so close but that they will easily separate; and thus a tree may be removed in its native soil almost without loss of fibre. They may be set in a wagon in their growing position, and safely transported, by careful driving, to almost any distance.

Another method of obtaining is, to go into swamp lands, where old logs and stumps are always to be found in abundance; around and over these is often a shallow stratum of vegetable earth, formed by the decomposition of substances gathered round. From this, evergreens frequently spring; and as their growth increases, they push their main roots to a deeper and moister soil. We take an axe and cut off these descending roots; after which, by gently raising the tree, you can save a thousand fibres, and all the soil from which the tree drew its first nourishment. This is a very pretty way of obtaining them; for by it we save all the earth necessary without getting a burdensome quantity to lift.

In putting out, we have had but little regard to the soil or size of the pit, provided it is large enough freely to admit the roots in their natural position. Soft and light earth should be brought in contact

with the roots of all trees, in order to facilitate the first efforts of the roots in pushing in a new soil. Watering we have found necessary the first season after transplanting, as we have, for the most part, taken our trees from moist soils, which had given them aquatic habits. We never prune our evergreens, but let them form heads to their own fancy; throwing out their first branches at the ground, and thus forming beautiful cones if they choose. If pruning is preferred, however, it may safely be performed *after the first year;* and any form given to the head by the knife they will be likely to retain, as they are not like deciduous trees—disposed to throw out new shoots to supply the places of branches taken off.

We have found it an excellent practice to keep the surface around evergreens well covered with leaves, especially in summer, when the rays of the sun fall most violently upon them. Leaves keep the earth cool and moist, which is a desideratum to their healthful growth. In their decay, they furnish a natural aliment to sustain and invigorate them.

We cannot but suppose that the culture of evergreens, when fully understood, will be perseveringly entered into through every section of our country. They will not only be raised to please the eye and feast the taste, but in northern and exposed regions, the time will come when they will be planted in belts around buildings and fields, to protect them from the rude blasts of winter and scorching sunbeams of summer, to which such regions are eminently exposed.

Yours truly, W. Bacon.

Richmond, Massachusetts, 1848.

THE FRENCH MODE OF SUMMER PRUNING DWARF PEARS.

BY PROFESSOR LINDLEY.

Summer has brought all sorts of inquiries about summer pruning. It is needless for us to say that the practice has always been advocated in our columns, and we hardly know how to add to what has been so often urged already. Instead, then, of an argument, we will to-day produce some facts, which we glean from Mr. Thompson's account of his visit to Paris.*

In the Garden of Plants there exist certain pyramidal pear trees, which may, we believe, be regarded as the most perfect models of management that can anywhere be found. For ourselves we can only say that we did not believe till we saw them that such trees could be formed by art. Not a shoot too many or too few; not a spur missed; not a branch misplaced. Had the trees been made up instead of being grown, they could not have been more admirablys ymmetrical. Mr. Thompson, who appears to have been as much surprised as we were, speaks of them thus:

"The pyramidal trained pear trees are from 10 to 15 feet high, or more, having a regularly tapering outline from the base to the top, where they terminate in a single shoot. The young plant is stopped according to its strength, and so as to furnish side branches. These are not in stages at uniform distances along the stem; on the contrary, almost every shoot which breaks out from the stem is allowed to grow; but the *laterals produced on these are pinched in summer*, and even such of the leading shoots

* Journal Hort. Soc., vol. ii., p. 202.

as appear likely to become too strong for the others, are stopped. M. CAPPE pinches all the young shoots, not required to form branches, *when in a very young state;* when they have scarcely pushed a finger's length, they are shortened to about 1 inch, or from that to 1½ inch. The portion left forms the basis of one or more fruit buds, bearing fruit in the following season, or a spur on which blossom buds are formed for bearing in the second season.

"The advantages consequent on properly managing fruit trees with regard to summer pinching, are so important that attention to the subject cannot be too strongly urged. By the operation, the shoots necessary to be retained have the great advantage of more light and air than would be the case if crowded by a multiplicity of laterals, retained till the time of winter pruning, when they must obviously be cut off, either so close as to leave no bud to push, or shortened to within a few eyes of their bases. In the former case the branch is left naked; in the latter, when the tree is sufficiently vigorous, the eyes left generally push other shoots, to be again cut back in winter; and thus crops of shoots are annually produced, instead of fruit for many years, or until the tree approaches the state of old age.

"The plan which M. CAPPE pursues succeeds admirably in the climate of Paris. The fruit on the pyramid pear trees under his management is stated on competent authority to have been last year exceedingly abundant, large and fine. This season the trees are healthy and vigorous, and well furnished with blossom buds. It may be said that the generally dry, clear air of Paris is very different from the cloudy and moist climate of many parts of Britain; the one being favorable for the formation of fruit buds, whilst the other favors the growth of wood and leaves; and therefore, circumstances being different, the same practice may not be equally proper for both. There are, moreover, instances of circumstances differing so widely as to require opposite methods of culture. But this does not hold good as regards summer pinching. In England the drawback is a dull atmosphere; the shoots and foliage want more air and light. Summer pinching affords this, inasmuch as it prevents the crowding and shading of wood and leaves necessary to be retained, by that which is superfluous; and therefore it must be considered of still greater utility in dull climates than in bright, more necessary in England than in France.

"Supposing the branches of a tree are properly thinned and regulated at the winter pruning, and that so far as they extend, their number is quite sufficient for the space they occupy; presuming, also, that the tree is in good health, a number of laterals are sure to spring. They are, of course, superfluous; and every one of them should be pinched as already mentioned. If the last year's shoot has been shortened at the winter pruning, then, besides the terminal one on the part left, one, two, or three next to it are almost sure to push; and these M. CAPPE commences to check by pinching when about three inches in length; but those nearer the base of the shoot he allows to grow till they attain the length of six or eight inches before he shortens them. The terminal bud is of course allowed to go on for the prolongation of the branch. It frequently happens in France, and the liability will be still more in the climate of England, that after a shoot is pinched back, the newly formed buds on the part left will push a secondary shoot in the same season. When this is the case with those under the care of M. CAPPE, *he also pinches these secondary shoots* to an inch or an inch and a half from where they originate. They rarely push again; but if they do, their growths are again reduced as before.

REMARKS ON RAISING CELERY.

BY R. L., LONG-ISLAND.

The raising of celery is a subject that may appear to your readers to need very few directions, as it is so generally understood in our gardens. But having been more than usually successful in growing this fine vegetable on a large scale, perhaps a few remarks, giving the detail of my mode, may not be unacceptable to your readers.

I raise my crop of celery mostly for the winter's supply; and, to simplify the matter, I shall only speak here of the main crop. Those of your readers who wish to have it *earlier*, may easily do so by starting the plants in a hot-bed about the middle of March.

The best time for the sowing for the main winter's crop is about the 1st of April. Although I have succeeded perfectly well by sowing on a rich warm border, yet to insure against the accidents of a cold and untoward season, I usually sow in a slight hot-bed, and cover, as usual, with glass.

About the middle of May I choose a bit of ground in the warmest and richest part of the garden for the "stock bed." This, I prepare by digging it thoroughly, and mixing with the uppermost six inches of the soil as rich a coat of old manure as I can well incorporate with it. In this plat, or bed, thus well prepared, I prick out the plants from the hot-bed three inches apart every way,—watering them thoroughly every day when the weather is not damp or rainy.

Here they grow until about the 10th or 15th of June—the season for the final planting out. Having fixed up the ground for my celery patch, I have it well *trenched* two feet deep with a spade, if it has not been trenched previously. In the trenching, I bury all the best top soil in the bottom of the lower spit, and throw the clayey or gravelly subsoil on the top. The reason for this procedure is obvious. You always set celery plants in a *trench*. If you take off half the top soil to make this trench, it is evident that you have but a very poor bottom left on which to grow celery. On the other hand, if you make the soil of double the usual depth, and put the best soil at the bottom of the two feet, it is placed exactly where it is of most benefit to the roots of the plants; while the poorer subsoil, being on the top, answers equally well to raise about the stalks, in order to blanch them.

Very well; at the 10th of June, then, I mark out my plat of trenched ground into trenches three feet from each other. The trenches themselves should be dug a foot wide and eight inches deep. You can scarcely make the soil in them too rich; and I have ascertained by experiment that the celery plant not only likes common stable manure, but is also very fond of bone dust, or horn shavings. I therefore, in preparing the trench, put half a *peck* of either of these substances to the soil of *every fifty feet* of trench, and a quart of fine packing salt. Then the whole manure, bone dust, etc, is well incorporated in the soil of the trench to the depth of six or eight inches, and you are ready for the transplanting.

It is best to do this in a dull or cloudy day. But if it is properly done, i. e., with *balls* of earth to each plant, one day will answer nearly as well as another. In order

to accomplish this, the stock, or nursery bed, in which the plants grow in their second stage, must be thoroughly saturated with water two or three hours in advance. Then, with a trowel, take up each plant separately, with a small ball of earth, lay the balls in a sieve or basket, and carry them at once and plant them in the trenches. If it is well done, as it may indeed be with the greatest facility, not one plant in five hundred will fail; and they will scarcely suffer the least check, and will require no shading.

About earthing-up the plants, in order to blanch or whiten the stalks, there is a good deal of difference of opinion; but it is all easily reconciled. If you wish *very large* plants, you must not commence blanching till the last three or four weeks. If you do not care about the size of the celery, but only the *delicacy* and *crispness* of flavor, you must commence earthing-up about the middle of August; doing it frequently, and very little at a time, in fine dry weather.

The two best sorts of celery that I have tried are *Seymour's White Solid*, and *Red Solid*. But, after all, I have raised as heavy and as fine plants of the *Common White*, by the mode here given, as of either of those varieties.

A word or two about *keeping celery for winter use*, may not be out of place here. Many persons complain of the difficulty of keeping it in winter—its rotting in the cellar, root-house, etc. The method I have employed for nine years, is a very simple, easy one, and I have never lost a single head by it, though I have raised and kept many thousands. It is as follows: In November, when the frosty weather sets in, and the time for digging the plants comes, choose a high and dry part of the garden in any convenient place; level it, and begin at one side to open a shallow trench, deep enough to *lay-in* the roots of the celery close together, burying them in an *inclined position*, so as to cover all the blanched part of the stalks,—only leaving the green leaves at the top exposed. The next row may be put within three inches of the last, and so on, row inclining upon row, till the whole is laid in. In this compact way, the space required for a large crop will be only a few feet square. This done, cover the whole, as soon as the winter sets in, with *two and a half feet of straw*, covered with a few bits of wood to keep it down. This will most effectually keep out all frost, while the temperature of the soil itself is so low that there can be no decay or change in the plants. At the same time, by removing a portion of the straw on one side, the celery may be reached at any time during the winter when required.

Respectfully yours. R. L.

Long-Island, May, 1848.

A VILLA IN THE ANGLO-ITALIAN STYLE.

Our frontispiece shows a very pleasing example of this style of country house, which we borrow from one of Mr. Loudon's publications, as a specimen well adapted for many sites in this country.

The Italian style is much more simple in its details than the Gothic. It is therefore cheaper in construction. It also more readily adapts itself to a variety of scenery and locality, and is, we think, on this account more likely to give pleasure generally than the Gothic style; for though nothing can well be more charming than the latter, when built in suitable landscapes, its effect

is often destroyed by the tame and bald character of the surrounding scenery. For suburban dwellings, especially, simple modifications of the Italian style are always satisfactory.

The villa shown in the frontispiece of this number is one called *Fortis Green*, situated in the suburbs of London, and the property of W. A. Nesfield, Esq., a landscape painter of eminence. It is picturesque in its exterior, as one would expect the residence of a landscape painter to be. And an examination of the interior plan will show what are considered *desiderata*, in England, in a villa of this class. The references to this plan are as follows:

a. Drawing-room.
a a. Green-house.
b. Dining-room.
c. Passage.
d. Staircase.
e. Entrance porch.
f. Closet.
g. Way to cellar, from kitchen and glass closet.
h. Kitchen.
i. Scullery.
k. Stairs to servant's room.
l. Laundry.
m. Store-room.
n. Tool-house, at end of which is the stoke-hole to the green-house.
o. Passage to the yard.
p. Larder.
q. Coal hole.
r. Wash-house.
s. Pump.
t. Yard.
u. Stable.
u u. Dung pit.

The chief difference between this plan and one of a villa of the same class in this country, is the superior accommodation afforded to the *kitchen offices*, and the near proximity of the stable to the house. In the arrangement of the kitchen offices, the English are more perfect, indeed, than any other people, and we have much yet to learn from them. In this country, this portion of our domestic establishments, even in houses of a superior grade, is often comparatively cramped and meagre; a feature which, in the end, is always found to be antagonistical to the comfort of the family in all its branches.

Fig. 61.—*Plan of the Principal Floor of the Villa.*

Fortis Green is a suburban place of only four and a quarter acres of ground. Of this, one and a quarter acre is occupied by the house, and ornamental and kitchen

garden; the remaining three acres are devoted to sheep! Mr. NESFIELD's amateur farming is more profitable than that of most sheep farmers, we are certain. His practice is to buy in autumn, at Smithfield, two ewes per acre. Then in March he buys eight tegs, (last year's late lambs.) The whole are again sold in autumn in fine condition. Mr. *Loudon* has given the detail of the management and *profits*; the latter being, for the three acres, £18, 15s, 10p. per annum. The pasture surface of the three acres is divided by hurdles; and the latter are moved every ten days, so as to give the sheep a "fresh bite" from time to time.

POOLE'S PREMIUM GARDEN ENGINES AND SYRINGES.

EVERY good gardener knows how useful and indispensable a good hand syringe, or small engine, is for all plants cultivated under glass. The pores of the leaves can no more be closed by dust, without injury to the perspiratory system of a plant, than diseased lungs can exist without endangering the life of an animal. Frequent sprinkling over the foliage keeps the breathing function in perfect order, and thereby contributes to the luxuriance and vigor of almost all plants.

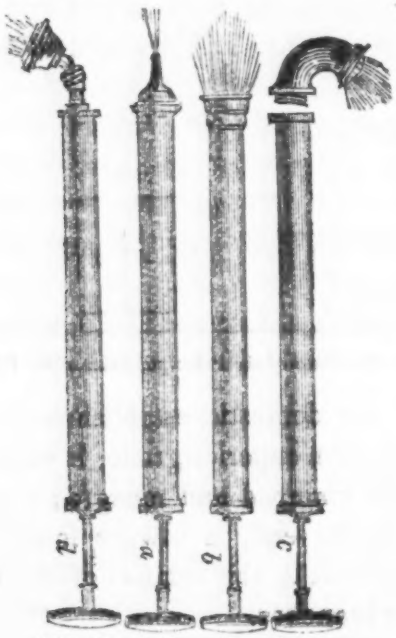

Fig. 62.—*A Green-house Syringe.*

Having had inquiries for machines of this kind from various correspondents, we are induced to publish cuts of several, manufactured by Mr. MARK POOLE, of New-York,* which, for excellence of workmanship and efficiency, are equal, if not superior, to any that we have yet seen.

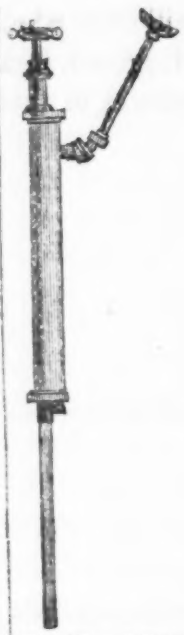

Fig. 63.—*A Small Hand Engine.*

Fig. 62 is a green-house syringe, after Read's patent, acknowledged to be the best yet brought into use. The different forms represent the same syringe with the various *caps* to regulate the stream of water discharged. *a*, shows the cap used when a simple stream of considerable force is required; *b*, a cap like an ordinary rose, for throwing a gentle shower; *c* and *d*, are crooked and goose-neck caps, to turn the shower in any oblique direction, as desired.

Fig. 63 is a small hand engine, of very convenient size, where the plants to be watered are within a small compass. It is readily placed in a watering pot or pail of water, wherever it is required.

Fig. 64 is a large and very perfect brass *hand engine*,—one of the neatest pieces of workmanship that we have seen. It unites a power almost equal to the barrow engine,

* The agents in New-York are *Messrs. J. M. Thorburn & Co.*, 15 John-street.

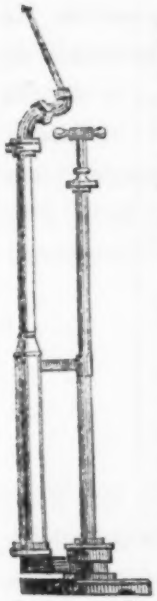

Fig 64.—*A Brass Hand Engine.*

with the facility of transportation of the small hand engine. It throws a powerful and steady stream of water, and may be placed in a pail or cask of water at any convenient point, or made a fixture, if the latter is preferred.

Fig. 65 is called the *barrel engine.* It is intended, properly, for large hot-houses, to be filled and carried by two persons to any desirable point; it being more easily managed than a barrow engine within doors.

Fig. 65.—*The Barrel Engine.*

Fig. 66 is a barrow engine, and is a most efficient watering machine for out-of-door uses,—lawns, flower parterres, washing diseased fruit trees, and the like purposes. It is also a useful protection against fire when first discovered; being always at hand, and easily worked by one person. This engine is very perfectly constructed, and the water box is provided with a strainer to prevent any impurities in the water from entering the valves, so as to derange its operation.

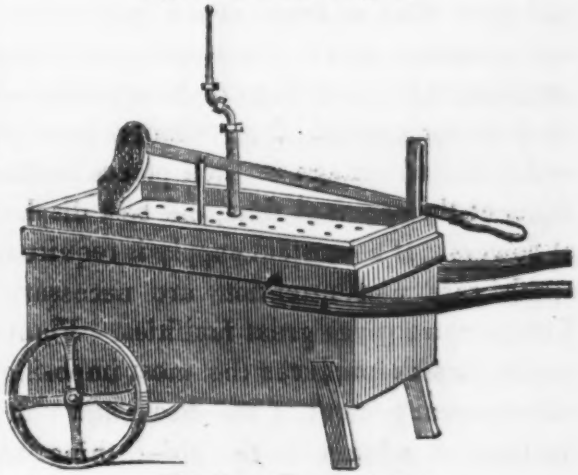

Fig. 66.—*A Barrow Engine.*

These engines are all constructed after the latest pneumatic improvements. The facility with which they are worked, and the volume and uninterrupted flow of the stream or shower discharged, render them greatly superior to the old machines, with the simple valve and air chamber of the common forcing pump. We are glad to be able to recommend them to our readers as very superior and complete implements, which are certain to give entire satisfaction.

DESIGN FOR A GEOMETRIC FLOWER GARDEN.

BY DR. WM. W. VALK, FLUSHING, L. I.

I SEND you a plan for a geometrical flower garden. It was designed by Mr. Brown, gardener to the late Duke of Buckingham, and is a very pretty thing of the kind.

When the nature of the ground will admit, the French parterre, or geometrical flower garden, is, above all others, the most to be recommended, for many situations, because it readily admits of the largest display of flowers throughout the season. There is

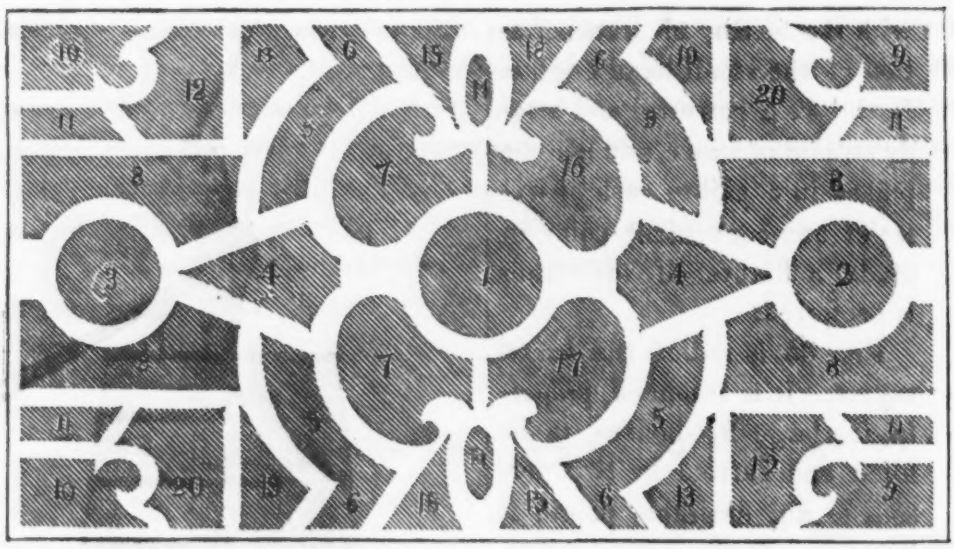

Fig. 67.—*Design for a Geometric Flower Garden.*

scarcely any difficulty in producing a splendid show once or twice in the year, spring and autumn; and in consequence of many gentlemen not residing all the season near their flower gardens, the gardeners have an additional advantage in such places to produce, at the required time, the best display of flowers. If a constant supply is required, much care and attention are necessary. The parterre gives great facilities. Planting in masses produces the most imposing effect; arrangement of the beds, and contrasting of colours, is the chief thing to be considered; succession of plants is also indispensable; the propagating by cuttings, seeds, &c., and keeping in reserve to turn out when a bed is prepared to receive them.

If there is no green-house, cold frames will answer for wintering almost every requisite plant for the flower garden in the spring, provided the glass be covered with sufficient matting to keep out frost; frames will be required to raise tender annuals. The above plan would look best with gravel walks and small box edgings in front of a green-house or a dwelling. In planting the beds, very much will depend upon the proprietor's taste with regard to his favorite flowers. Nevertheless, if the beds be planted in the following manner, very general pleasure and satisfaction will be given.

In the adoption of the plan, the scale must be adapted to the space of ground occupied.

The beds will be planted in spring as follows: 1, Hyacinths of sorts; 2, Tulips of sorts; 3, Narcissus of sorts; 4, Violets of sorts, Standard Rose; 5, Crocuses of sorts; 6, Violets of sorts; 7, Herbaceous Plants and Roses; 8, Hyacinths of sorts; 9, Ranunculus of sorts; 10, Anemones of sorts; 11, *Mathiola annua*, scarlet and purple, turned out of pots; 12, Herbaceous and Annuals; 13, same as 11; 14, Violets of sorts, Standard Rose in centre; 15, *Ænothera macrocarpa;* 16, Ranunculus, bordered with Snowdrops; 17, Tulips, bordered with Snowdrops; 18, same as 11.

In summer and autumn, the beds will contain—1, 2 and 3, choice Dahlias; 4, *Verbena melindres*, Standard Rose; 5, Calceolarias of sorts; 6, *Fuschia gracilis* and *microphylla;* 7, Herbaceous and Roses; 8, *Heliotropium peruvianum* and scarlet *Geraniums;* 9, *Salvia fulgens* and *splendens;* 10, *Salvia fulgens* and *involucrata;* 11, *Lobe-*

lia, *erinus* and *albus*, Standard Rose; 12, Herbaceous and Annuals; 13, *Mathiola annua*, sown in spring; 14, Violets of sorts, Standard Rose in centre; 15, *Ænothera macrocarpa;* 16, *Campanula pyramidalis* and *Lobelia fulgens* mixed; 17, *Campanula persifolia* and *Lobelia splendens;* 18, *Mathiola annua*, scarlet and purple, sown in spring.

Like the design figured at page 504 of your journal, this will, also, I think, have a charming and gay effect.

WM. W. VALK, M. D.

Flushing, L. I., May 9, 1848.

NOTES ON THE CULTURE OF THE APRICOT.

THE apricot is looked upon generally as a difficult fruit to grow; and, comparatively, little attention is paid to its cultivation.

Yet, it is a fruit which deserves more attention. Beautiful, and of agreeable flavor, its greatest merit, perhaps, is that it is in perfection at precisely that period when there is little or nothing else in the way of fine fruit.

In this neighborhood the apricot is a common fruit tree, and, in many cases, bears regular and excellent crops. We have a neighbor, about two miles distant, who is a very zealous fruit grower, and whose grounds occupy a table or flat, about 200 feet above the level of the Hudson. He has for several seasons grown crops of Moorpark and other finest apricots, as abundant as we have ever seen peaches or apples, and of delicious flavor. His trees are standard trees, grown in the open orchard, with no unusual care. The soil is a deep loam; and the site is one that secures him against spring frosts, while the curculio scarcely molests him. Mr. DUBOIS, of Dutchess county, on the opposite shore of the Hudson, also raises the variety known as his "Early Golden" apricot, in the open orchard, in great abundance. We saw, in 1846, two wagon loads of baskets of this fruit going to market from his trees.

There are two serious obstacles usually experienced in growing this fruit tree. The first, is the early season at which the blossoms expand, rendering them liable to spring frosts; the second, is the fondness of the curculio for the young fruit, and the difficulty of preserving the crop against its attacks.

Regarding the first obstacle, we would observe that there is a capital error committed by most cultivators in the *position* which they usually give this tree. Being considered a tender tree, it is almost invariably placed in a warm and sheltered site, *open to the sun*,—such as the southern side of a building, wall, or fence; or, at least, some particularly sheltered slope or nook in the garden.

Directly the opposite aspect is the proper one for this apricot. Wherever this tree will bear the winter's cold, (that is, wherever the peach can be cultivated, in the northern states,) there is never any difficulty in ripening either its fruit or wood in midsummer. The heat and light of the sun are fully sufficient for this, in any Indian corn district, without a southern exposure.

By all means, then, if the district is one liable to spring frosts at the blooming season, put your apricot trees in a cool aspect,

—the north sides of buildings, walls or fences, or the northern sides or slopes of your garden or orchard. Here they will be later in advancing in spring, and the blossoms will escape destruction by frost five times out of six. If a single cold night, notwithstanding, should threaten to rob you of a good crop, make a fire on the ground and cover it with damp tan-bark, placing it in such a position that a slight smoke will rise and protect the tree or trees endangered.

With respect to the curculio, that is a matter worth some serious attention; for, indeed, it is this little mischief maker which destroys ninety-nine hundreths of all the apricots in the country. Here, in our heavy loam soils, he finds but a poor place for his winter quarters, and his numbers are few. But in light sandy soils, he often punctures and destroys whole crops, year after year.

There are two modes of combatting this insect. If you have only a single tree or two in your garden, the easiest and most complete mode that we have tried, is to lay a cart load or more of fresh stable litter under the tree, as soon as the blossoms fall,—doubling the dose at the end of a week, if the insect is very abundant. This usually protects the tree in question; the fumes of the manure driving away the curculio.

But in a real curculio district, the most thorough, indeed, perhaps the only thorough mode of operation, is to adopt the plan pointed out in our last number (page 505,) by a "Pennsylvania Subscriber,"—that of planting all plums, apricots, nectarines, and other smooth stone fruits in a quarter by themselves, *adjoining the hog-pen*, and allowing the swine to have "free run" of the orchard for a certain part of the year. We have seen this tried with complete success in two instances, and have, therefore, entire confidence in recommending it.

Hundreds of our readers, in particular sections of the country, who scarcely ever get a fine apricot or plum, because they are all punctured by the curculio, may, by this easy arrangement of their trees, get large and regular crops.

With respect to the varieties of apricots in cultivation, there is nothing yet known in this country superior in size and flavor to the *Moorpark* and *Peach* apricots. They are beautiful and fine fruits, growing with us as large, or larger, than the Early York Peach. Among the new sorts that we have proved lately, the *Large Early*, and the *Large Red*, are both very delicious varieties, only inferior in size to the Moorpark. The flesh of the *Large Red* is in colour a fine dark orange, sweet and juicy. Both these sorts have borne with us for three years past.

The *hardiest* apricots known, are the *Roman*, the *Early Golden*, (Dubois',) and the *Breda*. These will endure frost, and bear good crops, in many situations where the other varieties fail entirely. Hence, they will be prized in many districts of the country where the larger varieties cannot be cultivated as open standards.

The *Early Golden* is perhaps the most *prolific* of apricots. It is of medium quality. The old Roman is well known, and is chiefly valued for its earliness and hardiness. The *Breda* is much the finest flavored of the three, and deserves to be much more widely known than it is at present in the middle states.

A severe storm, followed by frost, occurred here about the middle of April, this season. The apricot trees were in full bloom; and though it very rarely happens in this locality, (owing to the ameliorating influence of the river, which is a mile and a quarter wide,) that fruit is destroyed by spring frosts, yet that all the apricots would

Fig. 68.—*The Berda Apricot.*

perish, with this temperature, (the thermometer standing at 28°,) seemed inevitable.

We find, however, that three sorts have withstood the frost. These are the Roman, the Breda, growing in our own garden, and Dubois' Early, in the garden of a neighbor. These sorts have set good crops, and have, therefore, distinctly proved their greater hardiness.

The *Breda* apricot, like the other two, is a small variety. But it bears heavily; the fruit growing in groups or clusters on the branches, and the tree forms a broad bushy head. The fruit is a beautiful dark golden yellow in colour, round in figure, moderately juicy, and quite sweet and rich in flavor. It hangs on the tree sometime after ripening, and is altogether one of the most desirable sorts for general cultivation. We observe that Mr. Rivers, the English nurseryman, says, in his Catalogue, it is "the only variety that succeeds as a standard" in that country.*

There are few persons who know how excellent these small hardy apricots—the common Roman, Early Golden and Breda, are for *tarts*,—gathered at the last thinning of the fruit, just before it commences to ripen. Apricot tarts are more piquant and delicious to our taste than those of any other fruit.

* A spurious sort is sometimes cultivated under this name. The true *Breda* is *round* not oval.

PLANTING BY THE SEA-SIDE.

BY JAMES GRIGOR, NORWICH.*

To RAISE trees by the sea-side is one of the grandest triumphs of arboricultural skill. To plant *anywhere* successfully, confers peculiar satisfaction on the planter; but to raise a sylvan bower, whence the grandeur of the ocean can be closely contemplated, is in every respect more interesting and important. It is almost unnecessary to wait to enforce this position. The sea—one of the grandest features in creation—is viewed with awe and delight by all; but, in almost every instance, what a picture of sterility is spread out along its shores! Even our most fashionable watering places, with reference to their natural scenery, may with truth be represented as "dull and treeless." I shall therefore conclude, that to invest such scenes with rich sylvan furniture, is a point worthy of the closest attention.

Where has such a thing been done? will no doubt be the first question. To this I reply, that the examples are to be seen on the cliffs of the German Ocean, in the parishes of Runton and Trimmingham, in the county of Norfolk, the property of Sir Edward North Buxton, Bart. There are in all about twenty plantations in these parishes, extending over a space of about 120 acres, but I select one in particular, which will afford a striking illustration of successful maritime planting; it is called the "Boreas Plantation." The plants stand on a bold cliff, 250 feet above the level of the sea, towards the north-west, and part of them only twelve yards from the beach. Standing, on this plantation, the beholder looks down upon a wide expanse of the ocean, which is here literally whitened by the sails of the Scotch and Baltic traders. Its commanding prospect has recommended it to the officers of the Preventive Service, for here their watch-house is erected. This, then, is the locality.

How it has been planted is the more important question; and here I shall take care to state the details minutely. The first thing to be done, is to have the soil trenched with the spade, to the depth of 20 or 24 inches. This will cost 6*l*. per acre. Cheap processes of planting in such situations will prove of no use; they have been tried repeatedly with no success; and I have little hesitation in stating that it cannot be done effectually without the preparation alluded to. When trenching is put out to be done, at so much per perch, I have known unprincipled men leave about a third of the ground undisturbed. It should therefore be done either by the day, or with the understanding that if any part of the soil should be found unbroken, the price of the whole would be withheld.

2. The time for planting is of the greatest moment. All planting by the sea-side should be done during the month of March, or in the first fortnight in April. The plants will thus be free from the cutting winter's winds, until they have established themselves in their new situations. Some will no doubt go and try a half measure, by planting at the proper season on *untrenched* soil: let them do so—success cannot be theirs. It should be continually borne in mind that planting, under the present circumstances, is not at all *encouraged* by Nature; it is a union of the wild and tame which, though permitting, she does not fos-

* From the London Hort. Magazine.

ter; and Art, therefore, has to use her utmost exertions to compensate for the want of that encouragement.

3. So difficult is the work of maritime planting, that, in addition to the land being well prepared, and the best season chosen, there must be *shelter* created; and this should be done in two ways—as an outside work, by erecting a strong high fence of furze bundles, or brushwood, around the plantation, and by planting the young trees very close to each other, leaving only about a space of eighteen inches between them. At this rate, 19,000 plants will be required for every acre of land.

4. Cleaning the land for two years is all-important. The best plan is to take a crop of carrots or parsnips from the land the first year; and this will pay all the expenses of hoeing, &c., and do no injury to the trees.

The next point is to select the kinds of trees best suited for such a situation; for, if this should be neglected, the other instructions, as a matter of course, would be rendered useless.

The first deciduous tree adapted to the situation under consideration, is the Norfolk Black Sallow, a variety of the Salix caprea, thought by some to be peculiar to Norfolk: it is a most determined grower, even close to the water, and a tree which attains to a large size. In the parish of Runton, in the neighborhood of the sea, is a specimen which, at four feet from the ground, is nine and a half feet in circumference. It was the appearance of this tree, in such a situation, which led to slips of it being tried in the plantations above referred to. The quality of the wood of the Sallow is by no means first rate; and it is rather recommended as a nurse to others here mentioned, than as fit to occupy the ground permanently. However, in some maritime situations, any sort of tree would be gladly accepted, and, as it is not devoid of beauty, it should be planted where those of a better texture do not thrive. It will give some idea of the vigor with which this tree proceeds, when I state that, after the second year, it throws up shoots an inch and a half in diameter at the bottom; and, if trained to a single stem, it will become a tree twenty feet high, in four years. Slips or cuttings are quite equal to rooted plants, and there is a great saving in carriage in ordering the tree in the former shape.

The next best deciduous tree is the Black Italian Poplar, which may be readily obtained of any nurseryman. It is late in leafing, and to this circumstance, I think, is to be attributed its success in the situations under consideration.

The Scotch Elm forms a noble addition to the few trees suited to grow by the sea-side. On untrenched soil this plant becomes bark-bound, and covered with lichen; but, where its roots have liberty, it grows very rapidly.

The Alder is also to be recommended in plantations adjacent to the sea. Damp or swampy land is usually planted with Alders, and it is sometimes thought that it delights only in such soil; it is found, however, to grow luxuriantly in dry places, where the soil is loosened to the depth of two feet.

The Birch, Larch, and Ash do not always refuse to grow by the sea; and, with the aid of the Sallow for a few years to start them, I have found they succeed very well.

Amongst evergreens, the best tree is the Pinus Pinaster minor, a more robust grower than the common Pinaster, with shorter and thicker foliage. It is plentiful in the extensive Pinaster plantations of Jack Petre, Esq., Westwick, Norfolk, and it is there called the *false* Pine, the common Pinaster being termed the *true* Pine.

Very little inferior to the foregoing, as a maritime tree, is the Scotch Pine, P. sylvestris. Its wood is superior to that of the Pinaster, and, if the better variety, with red wood, is obtained, a more valuable tree can scarcely be had.

Amongst shrubs, my experience is not so extensive. The following, however, I have proved to be fitted to stand the sea air. The Elder, Snowberry, Berberry (Berberis Aquifolium) and the common Broom.

One other point has to be attended to, I mean the size of the plants. Cuttings of the Sallow will grow freely, and the other plants should not exceed four years in age. Plants which had been transplanted in the nursery the year previous to that in which they are used, are to be preferred to any others, for such are invariably furnished with small fibrous roots.

With such trees, planted at the proper season on well trenched soil, I should have no fear of being able to raise plantations on the sea-coast, wherever there is any depth of soil. A beach of pure sand can never be made to bear any sort of ligneous vegetation; but all other situations, and especially our watering places, which now present a scene of frightful sterility, are quite capable of being made green and shady. I am aware that sea-side planting forms a work often undertaken, and as often unsuccessful; but still, *there is a way* by which success is certain, for no tract of land can be more exposed, or nearer to the sea, than the "Boreas Plantation," now flourishing in defiance of those obstacles which, till lately, were considered insuperable.

FOREIGN NOTICES.

THE POTATO PROBLEM:—The solution of the Potato Problem is accomplished. At least, Professor LIEBIG thinks so. In his last work* he declares that the potatoes are attacked with influenza. "The cause of the disease is the same which, in spring and autumn, excites influenza; that is, the disease is the effect of the temperature and hygrometric state of the atmosphere, by which, in consequence of the disturbance of the normal transpiration, a check is suddenly, or for a considerable time, given to the motion of the fluids, which is one chief condition of life, and which thus becomes insufficient for the purposes of health, or even hurtful to the individual."

To say that the potato crop has caught cold, is new. But when we read in the same place that the cause of the cold, or influenza, is impeded perspiration or "suppressed transpiration," the novelty ceases. "The potato plant," says the learned chemist, "obviously (!) belongs to the same class of plants as the Hop-plant, namely, to that class which is most seriously injured by the stagnation of their juices in consequence of suppressed transpiration. According to KNIGHT, the tubers are not formed by swelling of the proper roots, but by the development of a kind of underground stalks or runners. He found that when the tubers under ground were suppressed, tubers were formed on the stalks above ground; and it is conceivable that every external cause which exerts a hurtful influence on the healthy condition of the leaves and stalks, must act in like manner on the tubers. In the districts which were most severely visited by the so-called potato disease in 1846, damp, cold, rainy weather followed a series of very hot days; and in 1847, cold and rain came on, after continued drought, in the beginning of September, exactly at the period of the most luxuriant growth of the potatoes."

In this at least there is no novelty. It is the same view as that taken by ourselves in this journal in August, 1845, when the disease first broke out, which was very generally adopted, but which we have long since shown to be erroneous. The opinion was just that which would be formed upon the first hurried glance at the phænomena, but which a full knowledge of the facts soon compelled its advocates to relinquish. The only material difference that we remark between Professor LIEBIG's discovery and the old hypothesis now referred to, consists in his introducing it in 1848 as something new, and surrounding it with an array of

* "Researches into the motion of the Juices in the Animal Body." By JUSTUS LIEBIG, M. D. Taylor and Walton. 8vo.

quotations from the experiments of HALES which are familiar to every student of vegetable physiology, together with some observations of his own on the motion of fluids in living bodies, the connection between which and the potato disease we fail to discover.

We wonder that Professor LIEBIG should not have perceived that the seasons of 1845, 6, and 7, in all which the disease was prevalent, were very dissimilar; we wonder still more that he should not have weighed the mass of valuable evidence that has been collected on the subject in every country in northern Europe, before he jumped to his present conclusion. It is still more extraordinary that he should not have asked himself why impeded perspiration, influenza, cold, or whatever else he terms the disease, should not have attacked the potato crop before the year 1845, and should have continued to do so every year since through seasons essentially different from each other.

It would seem, however, that men cannot reason calmly upon this subject. To our great surprise we find Dr. GREGORY, the translator of Professor LIEBIG's work, appending to it Doctor KLOTZSCH's proposition as confirming his author's speculation. What Dr. KLOTZSCH's proposition is, our readers have learned from Sir ROBERT SCHOMBURGK's translation of it in our last number. He thinks that by strengthening the potato plant it will be better able to resist the disease, an opinion that we have expressed a hundred times. He believes that this strengthening may be effected by repeatedly stopping the growth of the branches by pinching off their shoots, so as to strengthen the tubers and prevent those changes which result in the production of flowers and fruit, or, as he terms it, "to restrict the metamorphosis of the leaves." What that has to do with impeded perspiration we are unable to perceive. His object is to give the plant more vigor, by diverting into a smaller number of leaves the food obtained by the roots and sent upwards into the stem, which food, under ordinary circumstances, is dispersed through a large number of leaves. In principle this method is like our English plan of destroying the flowers, and which has not been attended with success; for although in the experiments in the Garden of the Horticultural Society, in 1847, topped or stopped potatoes were less diseased than others untopped, yet disease existed in both cases, and the difference was only as 9.56 to 13 per cent. There are, however, some peculiarities in the plan of Dr. KLOTZSCH which make it desirable to try it this year exactly in the manner which he indicates. So far, however, from pretending that the disease is impeded perspiration, he expressly declares himself "unable to explain the nature of the disease."

For ourselves, we regard it with as much uncertainty as ever; of this, however, we are persuaded, that be it what it may, it is not explained by our own original hypothesis, now produced as a novelty by Professor LIEBIG. (*Lindley.*)

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ON THE CHOICE OF FLOWERS.—We will suppose the possessor of a garden is desirous of making it as interesting and gay as possible during the coming season, and is asking our advice in the matter. The reply must be regulated by various circumstances which modify the arrangements necessary for this end, such as the present state of the garden, whether stocked with trees and shrubs or not, whether large or small, and whether much of it is laid down in grass. Many things are essential to the beauty of a garden besides good flowers. In autumn and winter the general laying out should be attended to, and if alterations of taste are demanded in the arrangement of the grounds, they must be deferred for the present. Our advice will relate to the general question, and point out what productions will make a garden of ordinary size more beautiful and attractive.

The old custom is to sow seeds of annuals in every vacant spot, and let them take their chance for the summer. Now annuals are very well in certain connections, but their general growth is indicative of bad taste, for they are mostly of straggling habit, and soon lose their beauty. I would have very few annuals in small gardens, and they should be of the dwarf kinds, such as Clintonia pulchella, the Mesembryanthemums, Nemophila, &c., which may be selected from a scientific catalogue, like that published by Mr. James Carter, of Holborn. This catalogue I have found of the greatest utility, as it describes the colour, size, time of flowering, and general habits of all plants raised from seeds. As to Sunflowers and Hollyhocks, and all such giants, they are inadmissible in small gardens. The Hollyhock is a great favorite of mine, but it must have room, and be seen from a distance. Nothing can be more inimical to the good adjustment and tasteful appearance of a garden than a crowded state of vegetation, shading the beds. No plant will come to perfection in such circumstances, and before autumn there will be a mass of entanglement, defying all efforts to arrange it, and demanding rooting up as the only remedy.

The Rose naturally is first in the list of plants which every garden may properly cultivate. It will submit to narrow limits, and may be had in pots for turning out, so that an amateur may have a choice collection of Roses at once. Beds of these are recommended, as well as isolated specimens. The China, Bourbon, and Hybrid Perpetual varieties may now be procured cheap enough, and if planted now, every advantage will be secured. Let the purchaser be well convinced of the honesty of the parties from whom his stock is procured. The writer once ordered a small collection of Hybrid Perpetuals in April, and received, instead of strong plants, little things which had been struck

in heat, were scarcely rooted, and which after three years still look dwarfish and sickly. Even nurserymen of first rate character are apt to forget the impossibility of plants doing well, when removed from a green-house to a garden. Disappointments of this character, to our certain knowledge, injure and restrict the trade in flowers.

Next to Roses come the tribes of exotics, which are adapted to our summer climate and make such a gorgeous show. Scarlet Pelargoniums, Verbenas, Petunias, Fuschias, Calceolarias, and many others, offer to the amateur opportunities of gratifying his taste at a small expense. These may be arranged according to the various colours, and will continue to bloom profusely until the autumnal frosts. They are, most of them, compact in their growth ; their foliage is less deciduous than that of annuals ; and their whole appearance has that tropical character which gives such a charm to gardens in the present day. The expense may be an objection, but such things become cheaper every year, and if the reader is disposed to acquire the easy art of propagating plants for himself, the first expense is the only one. Before the summer is past, a few purchased plants will have spread so as to allow many cuttings to be made from them, which in methods afterwards to be described may be easily preserved during the winter. We lay much stress on the employment of shrubby exotics for the adornment of summer gardens, because it is found by experience they are kept in order easily, and are inimitable in their power of furnishing exquisitely varied groups. *H. B. Gardeners' Chron.*

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Peche Reine des Vergers, (*the Orchard Queen Peach.*)—The Peche Reine des Vergers is stated in the "*Portefeuille des Horticulteurs*," for December, 1847, to be one of the most important introductions of the season, inasmuch as it supplies the desideratum of a variety adapted for succeeding as a standard ; for as such it produces abundantly, and its fruit is equal in size and flavor to the finest wall varieties. It was discovered by M. Jamin, two years ago, at Lores, Department of Maine-et-Loire.

The tree is vigorous ; shoots of an intense violet red next the sun ; the petioles, which are short and thick, are also tinged with the same colour, and are furnished with several glands (which appear from the drawing to be reniform.) The fruit is somewhat oval, but depressed at the summit like the Grosse Mignonne ; it is fourteen centimetres, or five and a half inches in its vertical diameter, and twelve centimetres, or four and seven-tenths inches transversely, and hence upwards of fourteen inches in circumference. The skin is of a fine purple next the sun, and golden yellow where shaded ; the down is fine and short. Flesh white, rayed with red at the stone, from which it parts freely, melting, perfumed, and vinous. The stone is large. The fruit ripens towards the end of September ; when ripe its perfume is powerful, and widely diffused.

When we take into consideration the superior climate of France compared with that of England, we will not be disappointed should this variety be found not adapted for a standard in this country ; but if it maintains a superiority on an east or west aspect, or even against a south wall in situations where other varieties prove too tender, we may be satisfied with the acquisition. *Gard. Chron.*

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Rhubarb.—This wholesome and agreeable vegetable has become so popular as a substitute for fruit in the early spring, that no garden should be without it. It will grow anywhere, is so hardy that no frosts will injure the roots, however much exposed, and is so prolific that a few plants will yield a plentiful supply of stalks for a large family. Yet, notwithstanding the ease with which it is cultivated, we often see it badly grown, and sometimes hear the complaint that parties have failed in their efforts to get a crop. Our remarks will obviate every objection, if attended to, and enable our readers to grow rhubarb for themselves with ease and success.

Rhubarb has a hard underground stem, which pushes forth buds plentifully at the crown, or part nearest the surface ; every one of these buds taken off with a portion of root adhering to it, will form a large plant in one season. If you wish to make a plantation now (although the season is rather too far advanced, it may still be done,) get as many buds or crowns as your bed will admit of, allowing each two or three feet every way, according to the habits of the varieties you prefer. The plan generally adopted is to purchase as many roots as are necessary to fill the allotted space, but this is a more expensive and far less eligible method than the one now recommended. Last year a new sort of rhubarb was offered in the neighborhood of the writer at 5s. a plant. Some of his friends purchased four or five roots, but he was satisfied with one. On receiving it he placed it in a hole, and covered it up with soil until February, when, on examination, five good buds were developed. The root was then divided into five parts, each of which, at the present time, is a large, flourishing plant, equal to any of those which were not divided. A bed was thus obtained for five shillings, equal, indeed superior, to some costing twenty-five shillings. We are convinced, from actual experiment, that rhubarb may be brought to perfection in one year ; that old beds are inferior to new ones ; and that fresh plantations should be made every two years. The old plan of making a bed to descend to posterity should be exploded, in reference to many garden productions. Strawberries, raspberries, rhubarb, &c. &c., should be removed often, if fine healthy produce is wished for.

Having a sufficient number of buds or crowns,

let them be planted in a well trenched and manured soil. If the leaves are developed, care must be taken to prevent their flagging. This may be done by placing over them some long litter, sufficient to answer the purpose without excluding light and air. The young plants will soon be established, and will grow rapidly. No leaves must be taken off the first year, as the object is to convey all the elaborated sap possible to the stem for future use. If the ground is good, and kept free from weeds, no more care is required, and abundance of fine stalks can be taken off next spring. An exposed situation, with plenty of sun and air, will of course bring this production to greatest perfection; but it will produce good crops without having these advantages fully. Every house with a garden, however small, may thus furnish the table of its owner, with little expense and trouble.

But rhubarb possesses the advantage of being forced with as much ease and as cheaply as it is grown in the open air. This may be done by growing it against a wall in a sunny aspect, and covering it when required with pots or boxes, over which fermenting materials must be placed. But decidedly the best method is to take the roots into the house to be forced. For this purpose they must be grown exactly as recommended above, that as much power may be treasured up in the roots as possible. To take up exhausted plants from a crowded bed, which has been stripped of its leaves during the season, is to deprive them of their natural advantages, and to expend the forcing process on weakened and imperfect subjects. Let cuttings, with a crown to each, be now put in, in the best possible situations, and by autumn they will be admirably adapted to your purpose. When the foliage is withered take up the roots, and put them singly into large pots or boxes. These may be stood away anywhere, and introduced, two or three at a time, into a warm situation. The writer placed his pots this winter in a dark closet, at the back of a kitchen range, and the rhubarb grew rapidly. Every house can find some spot having the advantage of greater warmth than the ordinary temperature. Rhubarb may thus be had at any time, and a good supply kept up until it is produced in the open air. It is very necessary to get it as early as possible, as its value is much lessened when gooseberries are plentiful. *H. B. Gardener's Chron.*

....

The Formation of Butter.—Upon this important subject I forward for insertion an article from the "Year Book of Facts" (1846); in which I think "Hantonienses" will see his idea fully carried out—the air-churn. "The Bishop of Derry has invented the atmospheric churn. Instead of the present unscientific mode of making butter by churning, his lordship accomplishes this measure by the simpler manner of forcing a full current of atmospheric air through the cream by means of an exceedingly well devised forcing pump. The air passes through a glass tube, connected with the air pump, descending nearly to the bottom of the churn. The churn is of tin, and it fits into another tin cylinder provided with a funnel and stopcock, so as to heat the cream to the necessary temperature. The pump is worked by means of a winch, which is not so laborious as the usual churns. Independently of the happy application of science to this important department of domestic economy, in a practical point of view it is extremely valuable. The milk is not moved by a dasher, as in the common churn; but the oxygen of the atmosphere is brought into close contact with the cream, so as to effect a full combination of the butyraceous parts, and to convert it all into butter. On one occasion the churning was carried on for the space of an hour and forty-five minutes, and 11 gallons of cream produced 26 lbs. of butter." *E. Hulme.* [The inventor is a Mr. Weston, of Liverpool—not the Bishop of Derry.] *Ag. Gaz.*

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The Propagation of Fruit Trees and other Trees from Cuttings.—From observation I am inclined to imagine that many kinds of fruit trees, deciduous ornamental trees, shrubs, and roses, may be propagated from branches and cuttings, a plan which appears to me to be of some importance; for almost every orchard, plantation, shrubbery, and rosary bears witness to some extent that unsuitable stocks for budding and grafting have been selected.

A circumstance that occurred in the spring of 1845 served to confirm my opinion, that many trees and plants could be successfully cultivated from branches and cuttings. During the winter of 1844, a considerable quantity of refuse prunings from the shrubberies, parings of grass edgings, sweepings of walks, and refuse from borders, were accumulated for the purpose of being converted into useful manure by charring. The beginning of February, 1845, was chosen for packing it together for that purpose; there were from 20 to 25 loads of it, and the greater proportion of it was in a green, moist state, intermixed with a considerable quantity of earth, and therefore it took a considerable time to char. The weather the whole time was severe frost, with a cutting north-east wind; nevertheless, the charring went on satisfactorily, and when accomplished, on taking the heap to pieces for the purpose of sifting and storing away the contents in a dry situation, I was delighted to observe at the base of one side of the kiln that a quantity of moss-provins and other rose prunings, together with Jasminum fruticans and branches of other plants, had put forth abundance of beautiful healthy roots. They had been cast upon the kiln at the finish of packing, and had become intermixed with the sweepings and rakings of half decayed leaves, gritty sand, and other earthy refuse; others within a few inches of those that had put forth healthy roots were completely

charred. The hint thus given I imagined might be turned to a useful account, and it struck me were tanks or gutters erected on a good principle in the open air, so as to afford bottom heat at the desired season, choosing healthy, suitable soil, and placing it on good drainage over those tanks or gutters, that cuttings prepared at a proper season, and inserted methodically in the soil, would strike with success.

Not having a convenience of this description myself, however, I resolved, when the pruning season of 1845 came round, to select cuttings of various fruit trees, such as apples, pears, plums, cherries, medlars, peaches, nectarines, apricots, some deciduous forest trees, shrubs, and roses, and to prepare them, some by cutting close to an eye of the young wood, and others by baring at the base an inch or two of the previous year's wood. They were laid in by the heels until the beginning of February, 1846, and taking the hint from observing the condition of the refuse prunings at the char-kiln, which had been lying about for some time previous to the materials being collected and packed for charring, I had a kindly hot-bed made with well wrought tree leaves to the height of about 30 inches, then about 3 inches of healthy loam, with some charred saw dust were mixed with it. On these I placed an old wooden frame, not so much for the sake of shelter as for seclusion to carry out my experiment. The cuttings were then placed in the soil at various depths in rotation, a kindly lining of the same material as that of which the bed was formed was placed all round; and the outside to the top of the frame all round was then thatched with furze faggots; this kept cold winds from the lining, giving the whole the appearance of a little furze stack. The result turned out to my satisfaction. I found that almost any deciduous tree or plant might be made to put forth abundance of roots, and formed into healthy plants, if all matters appertaining thereto were carried out on good and systematic principles.

Some fruit trees, however, are greatly improved by being budded or grafted on proper stocks, and the same holds good to some extent with other trees, shrubs, and roses, &c.; but I have observed that the properties of others have been very much deteriorated through their having been worked on unsuitable stocks. On the other hand, I have also seen many trees entirely fail, after good preparation had been made for them at a considerable expense, and at the very time when it was reasonable to suppose they should have made some return in the way of fruit; and others, again, have changed their naturally good properties; and therefore, that some of the first attempts to produce healthy, thrifty plants by this process may fail, it is not unreasonable to suppose, still I have seen quite enough to convince me that the thing may be accomplished to a considerable extent. I have often observed, on turning leaves, rubbish heaps, &c., that, besides branches of trees and shrubs having pushed forth healthy roots, green stakes, thrust into hot-beds for the purpose of ascertaining the degree of bottom heat, have under peculiar circumstances put forth roots. Others, again, have put forth strong shoots, only however to a certain extent, without roots; but I had never, previous to the spring of 1845, given such matters any particular consideration, with a view to discover why such things should happen, and the following facts may possibly throw a little light on the matter.

The last gentle forcing asparagus bed I had made that year (1845) for producing asparagus, until it came in naturally, was a kindly made bed of half decayed leaves, &c., from other hot-bed linings. The necessary soil and roots were placed on it, and a slight protection formed with stakes placed on the sides, with some temporary wood battens across and tied to the stakes on each side, for the purpose of holding up clear from the surface of the bed some evergreen boughs for keeping off the morning frosts, a plan which I find to answer very well for the last gathering of forced asparagus. Some rubbish faggots, made of refuse prunings, had been placed close by for sheltering other hot-bed linings; I pulled out of those faggots three branches, lopped off the side branches roughly, pointed one end, and thrust them into the asparagus bed for heat stakes. Time passed on, and the asparagus over; in the first week in May I proposed pricking a quantity of young celery plants on the bed, but looking about I observed strong shoots had burst forth from all the three stakes, and on pulling them up each was well rooted from the earth's surface to the depth of about 6 inches, and the size of the stakes thus far considerably increased, while the part below the roots remained unincreased. Two of the stakes were Fraxinus excelsior; both happened to be placed the bare end downwards into the bed, while the other, a common laurel, was by chance thrust in top downwards, and was beautifully rooted; its buds (of course pointing towards the bed) had pushed several strong shoots from 4 to 10 inches in length, and had turned up horizontally from the stake which had been thrust in slantingly.

From this and other facts of a similar nature, it has appeared to me that abundance of healthy plants may be produced from branches and cuttings if properly selected, and at the right season methodically placed on bottom heat, the latter being maintained only a sufficient time at the proper season; and, at the same time, the whole of the branches or cuttings left above the surface of the soil should be fully exposed to the open air. *Jas. Barnes, Gardener to the Baroness Rolle, Journal London Hort. Soc.*

DOMESTIC NOTICES.

ILLUSTRATIONS OF MEDICAL BOTANY, (*consisting of colored Figures, large quarto, of the Plants affording the important articles of the Materia Medica, and descriptive text by* JOSEPH CARSEN, *M. D., Prof. Mat. Med., &c. &c. Philadelphia, Robt. P. Smith*, 1848.)

It is gratifylng to observe the progress of American art in the production of accurate and finished works in the different branches of Natural History.

That the taste and demand for really excellent works of this kind is surely increasing, is proved by the successful publication of such works as Audubon's magnificent collections of birds and animals of America, Michaux and Nuttall's beautiful series of plates of the American trees, and others of similar character. We are now gratified by the addition to this series, of two beautifully executed volumes of illustrations of the plants used in the Materia Medica, by Dr. Carsen, of Philadelphia.

They have been taken from nature, as well as from a great variety of the best and most authentic authorities, with care and judgment. The medical value of the work, which from the high commendations of the principal Medical Journals, must be great, does not lie within our province, but as a valuable contribution to botanical science, we cheerfully recommend it to our readers. We would notice in particular the beautiful plates of the Cerasus serotina (wild cherry) and the Cornus florida (dog wood,) taken from nature, as being beautifully and faithfully executed.

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HEATING GREEN-HOUSES.—In some late files of the *Gardener's Chronicle*, published in London, and edited by Prof. LINDLEY, I find strong recommendations by the editor, and numerous contributor in favor of "Polmaise heating" conservatories, vineries, &c., without any explanation of the necessary apparatus of such a mode of heating.

Will you have the kindness to state in your interesting journal, if it be adapted to the cold climate of Canada, and to give such an explanation of the plan of such mode of heating, that any good mechanic may understand it ?

I am just completing a vinery 210 feet in length, 18 feet in width, and am desirous of ascertaining if the Polmaise heating can be advantageously applied.

I send you the first report of our Horticultural Society. I have proposed to our committee to offer a premium to the practical gardener who possesses the greatest amount of knowledge in Horticulture, including chemistry and engineering and landscape gardening, so as to be able to take levels, and lay out grounds, as well as cultivate them well. It would, I think, tend to excite a spirit of emulation among gardeners in the study of their profession. Yours, very respectfully, *William Lunn. Montreal, April*, 1848.

["Polmaise" is an excellent mode of heating, inasmuch as it provides a circulation and supply of fresh air for the plants. We fear that in the mode applied in England, it would not be found of sufficient power for the climate of Canada—but the principle—that of a warm air chamber round the furnace into which cold air enters, and from which warm air issues into the house—may be applied with the aid of the old system of flues or water pipes. We will endeavor to give some explanation, and the necessary illustrations of "Polmaise heating," soon. ED.]

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GENERAL CONVENTION OF FRUIT GROWERS.—Allow me through the widely read columns of the Horticulturist, to suggest the propriety of holding a convention of fruit growers the coming autumn in the city of New York, to exhibit, compare, and test the qualities of all such *fruits* as may then be at maturity. The first week in October would probably be a convenient and suitable time. The convention might be composed of delegates from the various Horticultural Societies, and such fruit growers as chose to attend.

I cannot but think that such a convention would have a tendency to produce unanimity of opinion respecting really desirable fruits, to establish a more correct nomenclature of the varieties already in cultivation, and bring practical men in close connexion—all of which I deem of great importance to the community at large.

The sessions of such a convention might be adjourned from year to year, thus making it a perpetual institution, if its labors were found useful. Yours, &c., *Thomas Hancock. Burlington, N. J.*

[Our correspondent's suggestion meets with our entire approval—committees from the different societies, and fruit growers generally, would be able to bring together a vast number of the finest fruits of the Union. Comparison, and the free expression of opinion as to the merits of varieties, would soon enable the convention to determine the really *good sorts* from the *indifferent*. We are satisfied that while this is left to individual preferences, and local prejudices, this kind of winnowing the wheat from the chaff must go on very slowly, or not at all.

New York appears to us to be *the point* to hold such a convention. It is more central to fruit growers and pomologists from north, east, and west than any other of our larger cities. We hope to hear the opinion of other correspondents on this proposal for a general convention, and trust a plan may soon be matured for its convocation.—ED.]

Pennsylvania Apples.—*Friend Downing*—A little typographical error occurred in the names of two fruits alluded to in my letter published in the April No. of thy paper; which I by no means wish to attribute to the men of types, remembering with becoming modesty my somewhat notoriously illegible hand. It should have read "Smokehouse" instead of "Smathehouse," and "Tulpehocken," instead of "Tulpehacken."

This latter is sometimes called the Pound apple, and since writing the above letter I have conversed with some of the most intelligent fruit growers of this county, who believe it entirely identical with the "Fallawater," a very popular variety in some sections of this State, where it is the best known, particularly in Berks county among the German farmers. There too the Tulpehocken is raised in great perfection, and as it bears the name of one of the townships of Berks, it is in all probability the Fallawater dressed up in a new name by some admirer of the fruit resident in Tulpehocken in honor of his district—having in all probability forgotten the true name. There is also a variety known as "Pims' Beauty of the West," considerably disseminated in the nurseries about Philadelphia and in New Jersey, which will quite likely prove to be this same fruit. John Pim, formerly of this county, removed to Ohio, and some fifteen years back, came in on a visit to his native place, bringing with him some grafts of a superior variety of apple. From these grafts a nurseryman raised two trees and named the variety in honor of his friend Pim. One of these trees stands some two miles southwest of *us*, and is the parent of the stock now in cultivation. The tree is a fine thrifty grower and bearer, and the fruit is deemed very fine. If this variety should really prove to be the Fallawater, it will unsettle some catalogues, and therefore is a question of some interest to the propagators of fruit. Will not some one throw light upon the point? If able, I shall forward specimens of the fruit to the Horticultural Society of Philadelphia, or other competent judges, this fall, for the purpose of ascertaining the facts if possible. Sincerely thy friend, J. F. *Chester co., Pa.*

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Effects of the Winter at the North.—The past winter has been a disastrous one to the cultivators of fine fruit, in this region. The fruit buds of the peach, apricot, and the fine varieties of cherry, were all killed. The plum trees have here and there a straggling blossom, while the common sour red cherry has a good show of them, and the native wild plum is in full bloom, not a bud injured. The pear trees are in blossom as usual. and the apples promise well also. The wood of tender trees has been unequally affected by the winter's cold. The peach has not been much injured, while some varieties of apricot have been nearly destroyed. The Hemskirk is scarcely touched, while the Breda, Blotched Leaf, and Moorpark, are severely injured. Dubois' Early apricot, planted out last November, has passed the winter without injury. The young wood of bearing plum trees, even the Peach plum, is not hurt, while most of the latter variety in the nursery, even two or three years from the bud, are killed. Our grape vines, Bland, Catawba, &c., passed the winter safely. I have lost only a few Brown Beurre pear trees in the nursery, their growth being moderate, from one to two feet, while the pear trees of one of our nurserymen, in highly manured ground, which made a rank growth, are almost entirely destroyed. Taking advantage of a rainy day, I have been looking over the record of the weather, which I have kept since October, 1829: and I think it will afford us some encouragement. The earliest blossoming of the apricot and plum, was the 15th April, 1834, and the latest 18th May, 1835, and 1841, being a difference of 33 days. The apricot fruit buds, have been killed three times during this period, while the peach have suffered eight times. The plum buds have been extensively killed, only in 1835, and 1848. Fourth January, 1835, the thermometer was 32 below zero; 11th January, 1848, it was 21 to 24 below. As a general rule, if the mercury does not fall below zero till after the middle of January, the fruit buds are less injured than if it happens in December, or early in January. The winter of 1835, '36 was long and severe, the mercury being below zero more than thirty mornings and evenings, during December, January, February and March. And although the ground being deeply covered with snow, remained unfrozen all winter, yet large bearing peach and quince trees were killed to the ground; some sprouted and have been bearing for several years. Yours truly, *Charles H. Tomlinson. Schenectady, May* 9, 1848.

[The season, here, has been favorable, and there is promise of a fine crop of all kinds of fruit.—Ed.]

....

To prevent the attack of the Rose-bug. *Sir*—I noticed in the Horticulturist of August last, the complaints of "A Jerseyman" against the rose-bugs, and he inquires whether there is any remedy. I have, for several years, applied a simple, easy and effectual remedy for them. Take dry ashes—those taken up in the kitchen the same morning are the best because dryest—and with some little paddle, or a transplanting trowel, throw them plentifully into all parts of the tree or shrub while the dew is on, and the earlier the better. A repetition on two or three mornings will be well at first—after that, a little watchfulness will discover whether any further application will be necessary. These bugs frequently destroy the tender shoots of young cherry trees and the blossoms of our grapes in this section of country. I have never known a plentiful sprinkling of ashes, for a few times, fail of saving the trees or securing a crop of grapes from their ravages.

I have used the same remedy for the curculio on the plum tree, and have never known it fail of

saving the crop when begun in season, and followed up regularly two or three times a week. After a rain it should be immediately renewed. *R. Newton. Worcester, Mass., May* 10, 1848.

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THE WHOLE SECRET OF RAISING CRANBERRIES.—*By B. G. Boswell, Philadelphia.*—Now that ten times the quantity of this valuable fruit is cultivated above what there was forty years ago, and yet the price is full one hundred per cent. higher than formerly, and when it is now shipped from Boston to most of the middle, and the southern, and some of the western States—to the West Indies, Europe, and even to the East Indies—it seems perfectly natural to inquire if the fruit cannot be grown in different and various sections of the country.

We have written so often on this subject as to be nearly ashamed of writing another word ; but knowing that thousands of the friends of Horticulture are totally unacquainted with its cultivation, we proceed to give the best method of culture on *wet, moist, and dry soils.*

The soil may be sandy, gravelly, loamy or mucky—but the more muck the better. *Clay* soil should be particularly avoided as it will bake in dry weather, and the cranberry never flourishes on this kind of soil.

SWAMP SOILS.—Where this kind of land can be drained, and then ploughed and harrowed, it makes a most desirable soil. Strike out furrows, two feet apart, and set in the plants six inches apart in the furrows or drills—care being taken to put all the root part of the plant below the surface. Keep the ground clear of grass and weeds the first season by hoeing. In general no cultivation is needed afterwards, and in two or three years the vines will completely cover the ground. Frequently some fruit is produced the first season.

Abundant crops are yielded when the vines cover the ground ; three hundred and twenty bushels to the acre having been produced.

Where swamp ground is situated so low that it cannot be drained, cover it during winter with sand or gravel to the depth of about three inches—this will kill the grass—dig small holes and set out six plants together in a hill two feet apart each way. Where a person has a field of plants growing, *sods* of the plants, three or four inches square, may be set out three feet apart each way. Fine plantations have been made in this manner.

MOIST UPLAND, is treated in the same manner as *drained* swamp land.

Dry upland should have some swamp muck put in the furrows, previous to setting the plants, if convenient.

Gathering the fruit.—Cranberry rakes are now used in Massachusetts, with which one man can gather fifty bushels in a day—and although these rakes tear the vines somewhat, yet the crop is not diminished ; on the contrary, it is increased. Some years ago a farmer in Massachusetts commenced raking his little patch of one-fourth of an acre. The first year it produced twelve bushels, the next eighteen, the third twenty-five, and so on till he gathered sixty-five bushels, or at the rate of two hundred and sixty bushels per acre.

This increase is easily accounted for—the pulling up a few vines loosens the ground, and although not intended, yet in fact the raking acts as a partial cultivator.

Shipping the fruit.—Previous to shipping cranberries, the berries should be run over a platform slightly inclined—across this platform should be nailed some common plastering lath six inches apart. The bruised fruit will not run off but stick fast on their way down the platform; and are scraped off and thrown away, or else sold at a reduced price. If the fruit is to be sent to Europe or Asia, it should be put into tight casks, and when headed up, filled with water. In this manner they arrive in Europe in perfect order, and have frequently sold in England and France at twenty dollars per barrel.

Ten thousand plants will plant out nearly a quarter of an acre. In three years, from this fourth of an acre several acres may be planted out from plants of one's own raising. The plants may be set out in November, in the fall, and from the opening of spring until the 20th of May. *B. G. Boswell. Philadelphia, May* 17, 1848.

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MR. LONGWORTH'S STRAWBERRY CHALLENGE ACCEPTED.—A. J. DOWNING, Esq.—I have been so pressed with correspondence and other avocations that I have reluctantly deferred for some time past a portion of my duties to the public and to myself. The amateurs of Pomona and of Flora will, however, in the result realize that I have not been idle "in *taking* notes," if I have appeared remiss in their annunciation. The "Strawberry Question" will in the finale be solved by more substantial means, than by such falsified quotations, misrepresentations, and plagiarisms, as I perceive the public have had palmed upon them of late, and which will at leisure receive their merited rebuke. My present object is to say but few words, and those direct to one of the points in the controversy. Mr. Longworth, whose opinions are entitled to the highest respect, and consequently to a full investigation, has repeatedly offered a reward of $500 for the production of any staminate variety of the strawberry, that will produce a full crop. Indeed he has stated that he never yet had one such variety "that would average one quarter of a crop," and again in a letter to me, "you cannot produce the plant that will average one quarter of a crop of large perfect fruit from what you call a perfect plant; much less can you one in which both organs are perfect in all the blossoms," and in another letter to me commenting upon various staminate varieties, he says, "your Primate is S., and very large and productive. This surely may claim the $500." In order to obtain a fair under-

standing, I addressed a letter to Mr. L., asking him what he would deem a full crop, entitling the plant to the premium offered of $500. His answer runs thus: "I am certainly explicit enough as to what I expect for $500, and from your catalogue, you have the very kind. A perfect plant, bearing an abundant crop of large perfect fruit. I do not even ask this; one that will with similar cultivation, average half the crop of large perfect fruit that the Hudson, Hovey, Necked Pine or Pistillate Keen, will do, will satisfy me." I wish now to state that, I ACCEPT THE CHALLENGE, and I ask the appointment of an arbiter to meet one I will appoint, and to prevent delay I now select J. D. Scott, Esq., one of the Secretaries of the Long Island Hort. Society. I trust there will be no delay on the part of Mr. Longworth, as the season of maturity will be earlier this year than the last. Yours respectfully, *Wm. R. Prince. Prince's Linnæan Botanic Garden and Nursery, Flushing, L. I.*

Amateurs of the strawberry are invited to view my collection when in fruit. It comprises specimen beds of above 100 *select, prolific, and highly estimable varieties*, covering one and a half acres. Those who are lovers of fine fruit may be glad to know that I distribute all the fruits from my grounds gratuitously, and never have sold any.

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COMPARATIVE PROGRESS OF SPRING.—I have for the last ten years carefully noticed the progress of vegetation, to ascertain the forwardness of the seasons about the 1st May. My observations have been made from the same trees, shrubs and plants in my garden.

Vegetation had advanced to a certain state on the following days, viz:

May 9, 1839.	April 18, 1844.
May 2, 1840.	April 27, 1845.
May 15, 1841.	April 24, 1846.
April 23, 1842.	May 10, 1847.
May 9, 1843.	April 30, 1848.

Thus April 18, 1844, the earliest season, vegetation was as forward as on May 15, 1841, the latest in the ten years—the present year is about an average. *G. Pomfret, Conn.*

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HORTICULTURAL SOCIETY OF THE GENESEE VALLEY.—List of officers for 1848: Levi A. Ward, of Rochester, president. John Williams, of Rochester, 1st vice president; Alfred Fitch, Riga, 2d do.; John R. Murray, Mt. Morris, 3d do.; Henry P. Norton, Brockport, 4th do.; Asa Rowe, Sweden, 5th do. James H. Watts, Rochester, treasurer. Leander Wetherell, corresponding secretary. Joseph A. Eastman, recording secretary.

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MARTYNEA FRAGRANS.—After many vain attempts to get the *Martynea fragrans* to come up in the close heat of a propagating house, I tried it, May 10th, in a pot out of doors,—sowed as carelessly as one would plant China Asters. I find they have now, May 22, come up as thick as hair; an evidence of what the fine genial atmosphere of nature for the last week can accomplish—exceeding the heat (artificial) of the tropics. *G. C. T. Astoria, N. Y., May*, 1848.

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NURSERY CATALOGUES.—I notice in each number of thy paper some prominent topic selected for an editorial leader. Suppose I suggest one for the next number—"*Nurserymen's Catalogues*,"—for really some of us, only familiar with little nurseries, and these chiefly of the apple, cannot understand how *so many* of them can offer for sale the "most extensive selections ever offered the public"—"the largest stock ever offered in the market," &c.—and so many of them the possessors of the "*Ancient* and *real* Linnean Botanic Garden and Nurseries?" How is all this? Are the matters thus blazoned forth in their catalogues and advertisements to be found in their nurseries? One who wants to believe all he can, would like to know. Sincerely thy friend, *J. F. Chester co., Pa.*

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CHINESE SAND PEAR.—I observed some time since, in the Horticulturist, a description of the Chinese sand pear, in which it was referred to as an ornamental tree altogether.

One of my friends has a tree of this variety in bearing, and his family use its fruit for preserving. They assure me that it makes one of the best sweet meats that can be made of pears. *Thomas Hancock. Burlington, N. J.*

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ERRATA.—In my article on strawberries, p. 497, 2nd column, I read thus—"in the variety *frasier framboise* (European wood strawberry) the flowers are always *diœcious*." Here is an error so evident that I am inclined to think it is not so written in the MSS. Yet if it be so, it no less needs correction. The *frasier framboise* of the French, is a variety of the Hautbois. How the words "European wood strawberry" came placed where they are, is beyond my memory just now. *Wm. W. Valk. Flushing, May* 9, 1848.

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ALBANY AND RENSSELAER HORTICULTURAL SOCIETY.—The annual meeting of the society was held at the agricultural rooms on Saturday, 6th of May. JOEL RATHBONE, Esq., president, in the chair.

The amendments to the Constitution, proposed at last meeting, were adopted.

The report of the executive committee of the proceedings of the society, during the past year, was presented and ordered to be published.

Mr. D. THOMAS VAIL, from the committee on nominations, reported a list of names for officers for the ensuing year. The following gentlemen were elected—being those reported by the committee:—

President—JOEL RATHBONE, of Bethlehem.

Vice Presidents—D. THOMAS VAIL, Troy; Dr. HERMAN WENDELL, Albany; EZRA P. PRENTICE, Bethlehem; V. P. DOUW, Greenbush.

Secretary—B. P. Johnson, Albany.
Treasurer—A. E. Brown, Albany.
Managers—Amos Briggs, Schaghticoke; Stephen E. Warren, Troy; J. M. Lovett, Albany; Wm. Buswell, Troy; J. McD. McIntyre, Albany; Jas. Henry, Watervliet; Wm. Newcomb, Pittstown; James Wilson, Albany; A. Osborn, Watervliet.

Committees for 1848.

On Green-house Plants and Flowers—Wm. Newcomb, of Pittstown, chairman; Dr. Stephen Wicks, Troy; A. J. Parker, Albany; C. Hemstreet, Troy; J. M. Lovett, Albany.

On Fruit—Dr. Herman Wendell, Albany, chairman; V. P. Douw, Greenbush; David Benson, Albany; B. Kirtland, Greenbush; W. Buswell, Troy.

On Vegetables—John S. Walsh, Bethlehem, chairman; Dennis Beldin, Troy; C. N. Bement, Albany; John H. Haydock, Troy; Robert F. Johnstone, Albany.

On Gardens—Luther Tucker, Albany, chairman; B. T. Cushman, Troy; C. F. Crosby, Watervliet.

On Essays, and for establishing synonyms of fruits—Dr. E. Emmons, Albany, chairman; Amos Briggs, Schaghticoke; Sanford Howard, Albany; John H. Willard, Troy; Dr. J. M. Ward, Albany.

On Discretionary Premiums—E. P. Prentice, Albany, chairman; Henry Vail, Troy; Wm. Cooper, Guilderland; David Hamilton, Watervliet; Seth H. Terry, Troy.

On Floral Designs, Bouquets, Ornaments, &c.—S. E. Warren, Troy, chairman; Abel French, Albany; George Gould, Troy; Erastus H. Pease, Albany; John B. Gale, Troy.

On Arrangements for Exhibition—For Albany—J. McD. McIntyre, chairman; James Wilson, Wm. Thorburn, Charles B. Lansing, Dr. John Wilson.

For Troy—S. E. Warren, D. T. Vail, Wm. Buswell, C. Hemstreet, Charles Dauchy.

Exhibitions for 1848–9.

At Albany, 2d Wednesday, 14th June—For fruits, cherries, strawberries, flowers, vegetables, &c.

At Troy, 2d Wednesday, 12th July—For fruits, cherries, currants, gooseberries, raspberries, flowers, vegetables, &c.

At Albany, September—Annual Show.

At Albany, 2d Wednesday of February, 1849. Annual Meeting—Fruit, flowers, &c.

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Answers to Correspondents—*Manures*—*E. B.*—Liquid guano is prepared by putting 1lb. of guano in 3 gallons of water. The mixture should be allowed to stand 24 hours before using it. It produces the most decidedly beneficial effects on all plants in a *growing* state; applied when they are dormant, it is frequently injurious. Camellias, and other wood green house plants, are greatly benefited by it if watered with it *while they are making young shoots*.

Rapid Growing Vines.—*R. W. C.*—*Cobea scandens* and *Ipomea Learii*, are the two best annual vines for covering a large surface rapidly. They are both very ornamental—may be had in pots of the florists, and should be turned out immemediately.

Fruit Trees.—*A Boston Subscriber*. It will be best to remove all the old soil round your diseased pear tree, and replace with a compost of good peat loam from an old pasture, mixed with a peck of lime, a bushel of wood ashes, and a cart load of stable manure. This will bring the tree into a healthy bearing state again.—*R. L. P.* (Baltimore.)—The Madeleine is rather more liable to fire-blight than other pear trees—try Dearborn's seedling—a finer early sort.—*W.* (Trenton.)—If your peach tree ripens its fruit prematurely, and sends out wiry shoots along the branches with dwarfish, narrow leaves, it certainly has the yellows. It is better to dig it up and burn it at once, as the disease will spread. Pruning other peach trees directly after cutting off limbs of one having the yellows, is sufficient to communicate this disease. *W.* (Pittsburgh.)—If your cherry trees refuse to come into bearing from over luxuriance, dig a trench and cut off one-fourth of the roots at their outer extremities. Small cherry trees may be brought into bearing early by pinching out the ends of all the terminal shoots about the middle of June, thus forcing them to form fruit buds for the next year.

Grapes.—*A constant reader*.—Give the soil in which your native grape vines grow a plentiful sprinkling of gypsum or plaster of paris, and turn this top-dressing under immediately. We have found this a complete protection against mildew. Under glass the floor of the vinery should be dusted over with flower of sulphur when the young grapes are formed, as directed by Mr. Allen in his pamphlet. This is a much neater process than throwing the sulphur on the bunches.

Gooseberries.—*J. B. S.* (Philadelphia.) Several of our correspondents tried the salt hay last spring for gooseberries, and found it to prevent the rust. It should however be spread under the bushes early in the spring.

Raspberries.—*J. Fulton, jr.* The true Red Antwerp is one of the hardiest of all foreign raspberries. It bears good crops here *without protection*—but still better ones if the branches are bent down in autumn and slightly covered with earth.

Garden Engine.—*M. P.* (Richmond.) will find a description of various kinds in this number. Mr. Poole's machines are admirably made. The larger *hand-engine* will answer his purpose exactly.

Cypress Vine.—*A Lady*.—Soak the seeds *three hours* in warm water before planting. They will then all vegetate.

Books.—*A Novice*.—Lindley's *Theory of Horticulture* is the best work on that branch of the subject in any language.—*Williamson*.—For a hand-book of reference the best little treatise on the kitchen garden, is Buist's *Family Kitchen Gardener*. It is to the point—no superfluous words. *Loudon's Suburban Horticulturist*, is a better book for the practical cultivator than his *Encyclopedia of Gardening*.

Roses.—*L.* (Rochester.) *Souvenir de Mal-*

maison and *Souchet*, are two of the most perfect and beautiful of everblooming roses. *Solfaterre* is a remarkably fine pale yellow Noisette in the same style as *Lamarque*, worthy of a place in every collection.

APPLE TRE EBORER.—*W. Johnson*—See our directions in last No. p. 531. You should apply the wash at once or it will be too late.

STRAWBERRIES.—*J. R. C.*—The "Aberdeen Bee-hive" is already in the hands of two or three cultivators in this country. The Messrs. Thorburn, of New York, we believe imported it first, and will offer plants for sale in August next. Swainstone's seedling likes strong, damp soil. It bears most abundantly with us though a staminate.—*Tyro*—You will easily understand the difference between strawberry blossoms if you compare *Hudson*, a pistillate sort, with *Early Scarlet* or *Ross' Phœnix*—staminate sorts.

*** Correspondents who are *subscribers*, will hereafter find replies to any questions on subjects within the scope of this journal, in this department, (unless otherwise requested)—and all queries put in a *brief shape*, and sent to us *free of postage*, shall receive attention.—ED.

ALBANY AND RENSSELAER HORTICULTURAL SOCIETY.

There will be four exhibitions during the year. The first to be held in June; the second in July; the third in September; the fourth in February.

Exhibition at Albany—Wednesday, June 14.

FRUITS.

Cherries—For the best and most expensive collection, not less than a dozen on each plate, $3; for the second best, $2; for the best three varieties, $2; for the best one variety, $1.

Strawberries—For the best and finest flavored dish, not less than half a pint, $2; for the second best, and finest flavored dish, $1.

FLOWERS.

Roses—Hardy, including all hardy varieties: for the best exhibition. $3; for the best twelve, $2; for the best six, $1.

Pinks—For the best six distinct varieties, $2; for the best three do, $1.

Pœonies—For the best exhibition of Herbaceous Pœonies, $2; for the best six, $1.

Pansies.—For the best ten, $2; for the best six, $1.

Pelargoniums—In pots, for the best six, $2; for the best three $1.

Fuchsias—In pots, the best six, $2; the best three, $1.

For the best display of Annual and Perennial flowers,	$2 00
For the best large round Bouquet for centre table vase,	2 00
For the best large flat Bouquet for mantel vase,	2 00
For the best basket Bouquet with handle,	2 00
For the best flat hand Bouquet,	1 00
For the best round hand Bouquet,	1 00
For the best six plants in pots, of different varieties,	2 00

VEGETABLES.

Turnip Beets—Best, not less than six,	1 00
Brocoli—Best, not less than three heads,	1 00
Beans—Best peck of string beans,	1 00
Best quart of Lima beans,	1 00
Cabbage—Best, not less than two heads,	1 00
Cauliflowers—Best, not less than two heads,	1 00
Celery—Best six roots,	1 00
Corn—Best half dozen ears of any variety,	1 00
Cucumbers—Best brace grown under glass, if before any of open culture are exhibited,	1 00
Best brace open culture,	1 00
Lettuce—Best, not less than three heads,	1 00
Peas—Best half peck,	1 00
Potatoes—Best half peck,	1 00
Rhubarb—Best six stalks,	1 00
Squashes—Best, not less than three,	1 00
Tomatoes—Best, not less than two quarts,	1 00

Exhibition in Troy—Second Wednesday, July 12.

FRUIT.

Cherries—Best and most extensive collection, not less than a dozen on each plate, $3; for the second do, $2; for the best three varieties, $2; for the best one variety, $1.

Currants—Best and finest flavored variety, not less than half a pint, $2; second best, $1.

Gooseberries—Best and finest flavored variety, not less than half a pint, $2; second best, $1.

Raspberries—Best and finest flavored varieties, not less; than half a pint, $2; second best, $1.

FLOWERS.

Carnation and Picotee Pinks—Best six varieties, $2; best three varieties, $1.

Dahlias—Best exhibition, $2; best twelve varieties, $2 best six varieties, $1.

For the best display of Annual and Perennial flowers,	2 00
For the best large round Bouquet for Centre table vase,	2 00
For the best large flat Bouquet for a mantel vase,	2 00
For the best basket Bouquet with handle,	2 00
For the best flat hand Bouquet,	1 00
For the best round hand Bouquet,	1 00
For the best six plants of different varieties, in pots,	2 00

VEGETABLES.

Premiums will be awarded on all such varieties published in the June list, as were not exhibited at that meeting.

September Exhibition in Albany—Which will be the Annual Show.

(The day will hereafter be designated.)

FRUIT.

Apples—Best and most extensive collection of different varieties, $3; second best, $2; best six varieties, three specimens of each variety, $2; best one variety, six specimens, $1.

Pears—Best and most extensive collection of different varieties, $3; second best, $2; best six varieties, three specimens of each variety, $2; best one variety, six specimens, $1.

Peaches—Best and most extensive collection of different varieties, $3; second best, $2; best three varieties, three specimens of each variety, $2; best one variety, six specimens, $1.

Plums—Best and most extensive collection of different varieties, $3; second best, $2; best six varieties, not less than six of each variety, $2; best one variety, not less than six specimens, $1; best seedling, *never before exhibited*, $2.

Nectarines—Best exhibition, not less than three specimens of each variety, $3; best two varieties, not less than three specimens of each, $2; best one variety, not less than three specimens, $1.

Grapes—Foreign—Best exhibition of not less than three varieties, and two bunches of each variety, $3; best two varieties, and not less than three bunches, of each, $2; best one variety, not less than three bunches, $1.

Grapes—Native—Best exhibition of not less than three varieties and two bunches of each variety, $3; best two varieties, and not less than two bunches of each, $2; best one variety, not less than three bunches, $1.

Figs—The best exhibition, not less than two varieties and three specimens of each variety, $2; best one variety, not less than six specimens, $1.

Watermelons—Best two varieties, $2; best one variety, $1.

Muskmelons—Best two varieties, $2; best one variety, $1.
Cranberries—Best half peck, $2.
Assorted Fruit—Best basket of Assorted Fruit of various kinds, $2.

FLOWERS.

Plants—Best six plants in pots of different varieties, $2.
Dahlias—Best display, $3; best twelve dissimilar blooms, $2; best six dissimilar blooms, $1; best flower, specimen bloom, $1.
Roses—Hardy Perpetuals, including Hybrid Perpetuals and Isle de Bourbons—best ten varieties, $2; best six varieties, $1.
Phloxes—Best ten distinct varieties, $2; best six distinct varieties, $1; best seedling never before exhibited, $1.
German Asters—Best display, $2; second best, $1.
Verbenas—Best twelve varieties, $2; best six varieties, $1; best seedling, never before exhibited, $1.
Round Vase Bouquet—For Centre table vase,—best, $2.
Flat Parlor Bouquet—For mantel vase—best, $2.
Hand Bouquet—Best and most beautiful pair, one round and one flat, $2.
Basket Bouquet—Best and most beautiful, with handle, $2.
Floral Designs—Best, most beautiful, and most appropriate, $3; second best, $2; third best, $1.

VEGETABLES.

For the best new Seedling Potatoe,	2 00
For the best half peck Winter Potatoes,	1 00
For the best Winter Squashes,—not less than two specimens to be exhibited,	1 00
For the best Long blood Beets—not less than six specimens to be exhibited,	1 00
For the best Carrots—not less than six specimens to be exhibited,	1 00
For the best Parsnips—not less than six specimens to be exhibited,	1 00
For the best Egg Plants—not less than two specimens to be exhibited,	1 00
For the best Winter Cabbage—not less than two specimens to be exhibited,	1 00
For the best Brocoli—not less than two specimens to be exhibited,	1 00
For the best Cauliflowers—not less than two specimens to be exhibited,	1 00
For the best Celery—not less than six roots to be exhibited,	1 00
For the best Martinias—not less than six specimens to be exhibited,	1 00
For the best Tomatoes—not less than half a peck to be exhibited,	1 00
For the best exhibition of different var'ts of Tomatoes,	1 00

Exhibition at Albany, on the second Wednesday February, 1849.

FRUIT.

Apples—Best exhibition, $2; best one variety, not less than six specimens, $1.
Pears—Best exhibition, $2; best one variety, 1.

FLOWERS.

For the best six plants in pots, of different varieties, $2.	
For the best display of cut Green House Flowers, $2; for the second, do. do. $1.	
For the best large round Bouquet for Centre table vase,	2 00
For the best large flat Bouquet for mantel vase,	2 00
For the best basket Bouquet, with handle,	2 00
For the best round hand Bouquet,	1 00
For the best flat hand Bouquet,	1 00

Camellia Japonicas—For the best display of cut flowers with foliage, $3; for the best six varieties, $2; for the best three varieties, $2.
Chinese Primroses—Best six varieties, in pots, $2; best three varieties in pots, $1.
Pansies—Best ten distinct varieties, $2; best six distinct varieties, $1.

Discretionary premiums for various objects of extraordinary interest, not included in the above list, if any such offer, will be awarded, five dollars at each ordinary exhibition, and ten dollars at the September show.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated monthly meeting was held on Tuesday evening May 16, 1848. The President in the chair. The exhibition was very handsome; among the great variety of plants were a number new or rarely seen, of which were a specimen of a green Rose, Doryanthes excelsa, in full flower, shown in R. Buist's collection. Azalea variegata, presenting one mass of flowers enveloping completely the entire plant, a most beautiful sight; also a number of fine seedling Azaleas shown by Peter McKenzie. A fine specimen of Habrothamnus elegans, Rhododendron sp. etc. by James Bisset, gardener to James Dundas. A collection of choice Roses, Paul Joseph, Louis Bonaparte, &c., by William Hall. Several tables of Pelargonia, and collections of Tulips. Also Indigenous Plants by Robert Kilvington—specimens of Double flowered Lily of the Valley by Mrs. G. Billmeyer, of Germantown.

Of Vegetables.—A fine show of Cauliflowers by John Riley, gardener at the Insane Hospital. Very large Victoria Rhubarb by William Hobson and Robert Dunk, and new Potatoes and Cucumbers by James McKee, gardener to C. Chauncey, Burlington. And extensive collections by Anthony Felton.

Reports of the Committees.

The committee on plants and flowers, after a minute investigation of the several articles for competition, have awarded the following premiums, viz., For the best 10 named Pelargonia, to James Bisset, gardener to James Dundas; for the second best do. to B. Daniels, gardener to C. Cope; for the the third best do. to R. Buist; for the best six named varieties of perpetual Roses, to William Hall; for the best 12 Tulips to Jonathan Bass; for the second best do. to James Ferris; for the third best, to R. Farrington: for the best four named Cinerarias to B. Daniels; for the second best do. to Benjamin Gulliss; for the best Hot house and best Green house plants, to James Bisset; for the best collection of plants in pots to R. Buist; for do. second best, to James Bisset; the third best do. to B. Daniels, gardener to C. Cope; for the fourth best do. to James McDonald, gardener to Miss Gratz; for the best Indigenous plants, Robert Kilvington; for the best Bouquet to D. Daniels; for the second best Bouquet, to R. Kilvington; for the best Bouquet formed of Indigenous flowers, to R. B. Kilvington; for the best basket of cut flowers, to B. Daniels.

And a special premium of three dollars for two very fine seedling Pelargonia, to R. Buist.

The committee would recommend a special premium of five dollars to James Bisset, gardener to James Dundas, for two beautiful floral arches composed of Bignonia venusta and the scarlet flowering thorn.

The Committee would mention with pleasure a very fine plant of the Doryanthes excelsa, in full flower, from the garden of Mr. Buist; likewise a most splendid specimen of the Azalea variegata in profuse flower, and many fine seedling varieties in flower from the garden of Mr. McKenzie.

The Committee noticed as new and interesting specimens, the double flowering Lily of the Valley from Mrs. G. Billmeyer.

The Committee on Vegetables report that they have awarded the following premiums:—For the best Cucumbers to Anthony Felten; for the second best cucumbers, to James McKee, gardener to C. Chauncey; for the best Rhubarb, to William Hobson; for the second best Rhubarb, to Robert Dunk; for the best Potatoes, to James McKee; for the second best Potatoes, to Anthony Felten. For the best display of Vegetables by market gardeners, to Anthony Felten; for the second best display by do. to A. Felten; for the best display by amateur gardeners to B. Daniels, gardener to C. Cope; for the second best display by do. to William Johns.

The Committee also award a special Premium of two dollars each to James McKee, and John Riley, gardener at the Insane Hospital, for very fine displays of Cauliflowers.

Member elected—Mrs. Dr. James Rush.

On motion adjourned. THOS. P. JAMES, Rec. Sec.

MASSACHUSETTS HORTICULTURAL SOCIETY.

Opening of the Hall for the Season.

Saturday, May 13, 1848.—The Hall of the Massachusetts Horticultural Society opened for the season to the public this day under favorable auspices, but on account of a heavy shower of rain, many were deprived of the pleasure of witnessing the magnificent display of Greenhouse plants which on no former occasion were in so great perfection. The plants were generally well grown, including many rare species and varieties, beautiful indeed, and worthy of the admiration and praise bestowed on them. It would be impossible to enumerate all, even if it were desirable, and a few only will be named.

From the President of the Society, (not in competition,) a very large Azalea indica variegata, three feet in diameter, four new seedling Azaleas finely striped, and Azalea indica, exquisita, Bellerophon, decora and tricolor recently imported from Germany. Twenty pots of choice Esrica, viz; E. vestita elegans, E. ventricosa alba, superba and breviflora. E. odorata, and a plant imported for E. cavendishii, *very superb*, but not true; Lilium peregrinum, or testaceum, two plants; a fine seedling Rhododendron between R. campanulatum and R. cataubiense; Epiphyllums, Fuchsias and Cinerarias, &c, in great variety.

Mr. Wilder's display was large, and very rich, including in his cut flowers more than two hundred blooms of Noisette Solfaterre, and Lamarque roses, fine Camellias and other beautiful greenhouse flowers.

From Hovey & Co., eighteen plants of exquisite Pelargoniums, viz., Beck's Centurion, Rosamund, Grandiflora, Foster's Orion, Drury's Pearl, and Celestial; these received Mr. Beck's first prize of five pounds. The Society's first premium in Class 1, was awarded for Beck's Blanche, Desdemona, Isabella, Rosy Circle, Celestial and ————and the first premium in Class 2, for Beck's Mustee Zanzummin, Gigantic, Marc Antony, Celestial and Hovey's Jenny Lind; also a plant of Campanula nobilis and cut flowers of scarlet turban ranunculus.

From T. H. Perkins, by William Quant, a grand display of greenhouse plants and cut flowers, including eighteen Pelargoniums of various sorts, finely grown, six Fuchsias (fine plants), six Cinerarias, six Calceolarias, six extra double Gilliflowers. Roses,—a splenid specimen of Auricaria excelsa, and a magnificent plant of Ixora coccinea.

From Nonantum Vale, by John Cadness, fine plants of Cryptomaria Japonica, Burchellea speciosa, Clematis azurea grandiflora, Azalea indica variegata, Cineraria bicolor, Cadnessii elegans. Sylph, Emperor, Van Houttii, and Ada. Also, six Calceolarias, nine Bouquets and cut flowers in variety.

From Joseph Breck & Co., Hyacinths, and a great variety of cut flowers.

From R. M. Copeland, fine Hyacinths.

From O. H. Mathers, by Thomas Needham, a collection of superb greenhouse flowers.

From Edward M. Richards, cut flowers, with Fumaria cucularia and Trillium pictum, fine indigenous plants.

From G. C. Crowningshield, by John Quant, a fine show of greenhouse plants, viz., six Pelargoniums, to which were awarded Beck's second prize of two pounds—viz, for Matilda, Joan of Arc, Orange boven, Sylph, Prince Albert and Lady Douro: six Ericas and fine plants of Lechenaultia formosa, Brugsmansia, Pimelia spectabile, Epiphyllum Jenkinsonii, Cytisus, &c. &c.

From Azel Bowditch, Pelargoniums, Cacti, and other plants, but of which no list was rendered to the chairman; also bouquets.

From Parker Barnes, plants without list.

From James Nugent, plants, but no return made, also fine cut flowers.

Award of Premiums on Pelargoniums—Fuchsia, various sorts, Pelargoniums, (Beck's Special Prizes.)

To Hovey & Co. for the best six dissimilar plants 1st premium..... $25 00
To John Quant for the 2nd best, do. 2nd do. 10 00

SOCIETY'S PREMIUMS—*Class 1st,*

To Hovey & Co. for the best six dissimilar plants, 1st premium..... $6 00
To William Quant, second best, 2d premium, 4 00

Class 2d.

To Hovey & Co., for the best six dissimilar plants, 1st premium, ... $6 00
To Azell Bowditch, do. second best, 2nd premium, 4 00

Roses, no premium awarded.

Fuchsias—To Wm. Quant, for the best six, 1st prem. 6 00

(No competitor for the 2nd premium.)

Heaths—To John Quant a premium of..... 2 00
Various sorts—To Wm. Quant, for the best display, 8 00
To John Quant do. do. 2nd best do. 5 00

John Cadness,
Thomas Needham, } Judges.
Francis Thieler,

AWARD OF PREMIUMS *on Cinerarias, Calceolarias, Cacti, Hyacynths and Bouquets.*

CINERARIAS—To Wm. Quant, for the best six varieties,..... $3 00
To John Cadness, 2nd best do. 2 00
CALCEOLARIAS—To John Cadness, for the best six varieties,..... 3 00
To Wm. Quant, do. 2nd best do. 2 00
CACTI—To A. Bowditch, for the best six varieties, 3 00

(No competition for the 2nd premium.)

HYACINTHS—To R. M. Copeland, for the best display, 5 00
To J. Breck & Co. and best, 3 00
BOUQUETS—To John Cadness for the best vase 3 00
To R. Bowditch, for the best Parlor 2 00
To John Cadness for the 2nd best 1 00

James Nugent,
John Quant, } Judges.
—— Cruickshank,

The Committee on CUT FLOWERS, award
To Thomas Needham the 1st premium of 3 00
To Wm Quant, 2nd do. 2 00
They also recommend a gratuity to the President for his fine display of greenhouse plants, of 8 00
For his splendid show of Roses,..... ..... 3 00
To Wm. Quant, for a superb Ixora coccinea,..... 3 00
To James Nugent for a fine show of Cut Flowers, 2 00

JOSEPH BRECK, Chairman of Committee on Flowers, &c.

Business meeting, April 15th, 1848. The President, M. P. WILDER, in the chair.

The President, by request of the Chairman of the Committee of Publication, presented the 2d number of the "Transactions of the Society," embracing the business meetings and exhibitions to the close of the year, and stated that the plates of the number were coloured by the hand of experienced artists, increasing the cost of the work to the society, and that a report thereof would be made in due season.

May 6th, 1848. President M. P. WILDER in the chair.

Voted, That the Recording Secretary be requested, and authorised, to distribute the tickets of members and invited guests through the "penny-post," and draw upon the Treasurer for such sum as may be necessary to defray the expense thus incurred.

Voted, That the sum of $10 be paid to Mrs. Hurd, of Billerica, by the Treasurer, for a grass bouquet, presented by her at the annual exhibition, and removed from the Society's Hall without her knowledge or consent.

The following motion was submitted by Cheever Newhall, Esq, with the desire that it be laid upon the table for consideration, to be taken up and acted upon at the stated meeting in July next, viz:

That appropriations for the objects of this Society be made at the stated meetings, in January, April, July, and October, and at no other meeting. The following gentlemen were elected members of the Society:

Life—George W. Warren, Boston.

Subscription—Wm. S. Wilson, Boston; John J. Clarke, Roxbury.

E. C. R. WALKER, *Rec. Sec'y.*